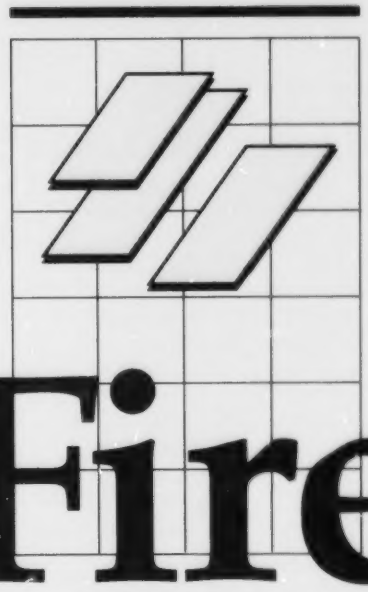

Fire Commissioner's Statistical Report

Alberta
LABOUR
General Safety
Services Division
Fire Prevention Branch

1 9 8 7

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Contents

Introduction

68th Statistical Report of the Fire Commissioner 1

Section One - Alberta Fire Casualties

Fire Deaths, 1978-1987 6
Deaths Involving Fire, 1978-1987 6
Death Rates 7
Fire Deaths by Geographic Location 7
Casualties by Age and Sex 8
Conditions of Casualties 8
Casualties by Month 9
Casualties by Time Period 9
Fire Deaths by Major Property Classifications 10
Injuries by Major Property Classifications 12
Fire Deaths by Act or Omission 14
Injuries by Act or Omission 16

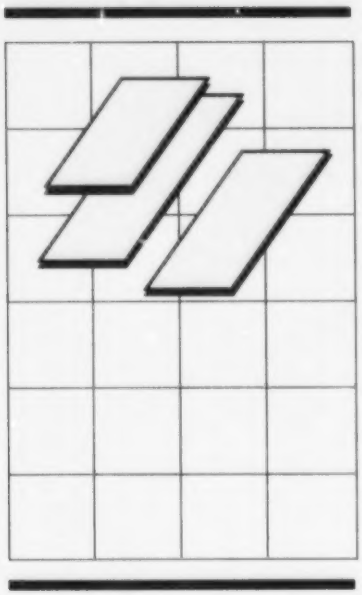
Section Two - Alberta Fire Loss Information

Fires and Losses, 1978-1987 20
Fire Rates and Per Capita Losses, 1978-1987 21
Average Loss Per Fire, 1978-1987 21
Fire Losses Related to Economic Indices, 1978-1987 22
Average Number of Fires by Month, 1978-1987 23
Average Fire Loss by Month, 1978-1987 23
Average Number of Fires by Day of Week, 1978-1987 24
Average Fire Loss by Day of Week, 1978-1987 24
Average Number of Fires by Hour of Day, 1978-1987 25
Average Fire Loss by Hour of Day, 1978-1987 25
Fires by Loss Category, 1987 26
1987 Large Loss Fires ($500,000 and over) 26
Fires by Major Property Classifications, 1987 27
Property Losses Related to Area of Origin, 1987 29
Property Losses Related to Act or Omission, 1987 30
Property Losses Related to Source of Ignition, 1987 31
Property Losses Related to Fuel or Energy, 1987 32
Property Losses Related to Material First Ignited, 1987 33
Property Losses Related to Initial Detection, 1987 34
Fires By Method of Fire Control and Extinguishment, 1987 35
Home Fire Losses in Alberta, 1987 37
Home Fires by Major Areas of Fire Origin, 1987 37
Home Fires by Major Sources of Ignition, 1987 37
Home Fires by Major Ignition Scenarios, 1987 38
Home Fires by Smoke Alarm Operation, 1987 40
Municipal Fire Loss Statistics, 1987, 1978-1987 41

Section Three - Glossary

Glossary 56

Directory of Branch Offices 59



Introduction

Fire Commissioner's
Statistical Report

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68th Statistical Report of the Fire Commissioner

Fire Commissioner – T. B. Makey

The Fire Prevention Branch promotes fire protection in Alberta through a number of programs. Those include the prevention of fires through public education, fire safety monitoring, advisory services and the collection and dissemination of fire loss data. Training in all aspects of fire protection, including prevention and suppression, is made available by the Branch to municipal and industrial fire departments through the Alberta Fire Training School (AFTS) at Vermilion and field staff located in regional offices. The Branch also assists with the enforcement of laws related to the suppression of arson.

A total of 7,878 fires were recorded for the province in 1987. These fires resulted in 39 fire deaths, 26 deaths involving fire (see glossary), 376 injuries and $156.9 million in property losses. Compared to 1986, fire incidents increased by 1.4 percent, and the number of fire deaths increased by 5.4 percent. Deaths involving fire showed a decrease of 3.7 percent, and the number of injuries decreased by 14.9 percent. The dollar losses rose by 60 percent over the previous year. The major reason for the increased property losses in 1987 was a $50 million estimated loss from a fire at an oil sands plant in northern Alberta.

Homes, representing one and two family dwellings, apartments/tenements and mobile homes, accounted for a total of 2,193 fires which caused 34 fire deaths, 3 deaths involving fire, 206 injuries and $27.5 million in property losses. Ninety percent of all fire deaths and 55 percent of all fire injuries in 1987 occurred in home fires. There were no smoke alarms in 54 percent of the homes that had fires last year. However, it is encouraging to note that occupants were alerted in 82 percent of the home fires where smoke alarms activated. Five data Tables in Section 2 of this report are devoted to an analysis of home fires in Alberta.

In April, the former Fire Commissioner, W.D. MacKay, presented a paper at an international workshop titled "Burning Issues – Towards Greater Fire Safety", held in Toronto. The presentation was at the invitation of the International Standards Organization in Geneva and the Standards Council of Canada, the co-sponsors of the workshop. The paper titled "Places of Fire Danger - In the Home, In Transport, and In Public Places" was based on statistical analysis of fire loss data from the data bank of the Alberta Fire Prevention Branch.

A report titled "Residential Fires: Places and Causes of Danger", prepared by the Branch, was published in the September issue of the Canadian Association of Fire Chiefs' publication, *Dialogue*. The report focussed primarily on the 1986 fire loss data from one and two family dwellings in Alberta, and identified the major sources of ignition and the major ignition scenarios in the leading areas of fire origin. The report revealed that most home fires start in the kitchen and that cooking oil igniting in pots or pans heated on stoves account for 60% of kitchen fires. An in-depth analysis of these fires, in a research report entitled "Cooking Oil Fires in Alberta Residences", formed the basis for the development of a pamphlet and a video program on cooking safely with fats and oils. The pamphlet and the video formed an important part of the public information package distributed by the Branch during the Fire Prevention Week campaign in October.

On-site municipal course attendance at AFTS increased marginally as did regional course attendance, while locally presented courses declined slightly. A total of 1,520 man weeks of municipal training, 4 percent less than 1986-87, were delivered in 1987-88. Industrial training declined also, from 477 to 464, a drop of 2.8 percent; however, attendance at AFTS seminars rose from 66 to 84, a 27.2 percent increase. A total of 1,170 fire investigations were conducted by Branch staff, police and fire departments, which is an increase of 5 percent over last year; 379 of these investigations were conducted by Branch staff. The number of fires determined to be caused by arson rose by 3.6 percent to 856. This increase indicates the need to continue a strong effort to determine accurately the

cause of all fires and to expose cases of arson, insurance fraud and other crimes.

Branch staff conducted 2,930 inspections during the year, 9 less than the previous year. The number of hazards identified during these inspections resulted in 9,608 recommendations being issued to correct them, a decrease of 6.4 percent compared to 1986-87. It was also necessary for Branch staff to issue 23 orders to owners or occupants of the properties inspected, 24 fewer than the previous year.

The Alberta Fire Prevention Council, in its fifth year of operation, effectively carried out its responsibilities hearing appeals on Orders and advising the Minister of Labour on matters concerning the Fire Prevention Act and regulations. In addition to hearing 22 appeals of orders issued pursuant to Section 12 of the Fire Prevention Act, the Council, reviewed eleven "special and unnecessary hardship" applications. The Council approved five of the eleven applications reviewed. Three of the Orders appealed were revoked, 16 were upheld and 3 were varied. Another 7 appeals were filed but were all withdrawn for various reasons.

Other activities performed by the Council were:

(a) Review of 81 proposed amendments to the Alberta Fire Code;
(b) Formation of a joint ad-hoc committee with the Alberta Building Standards Council to review all current data on residential sprinklering to advise and make recommendations to the Minister of Labour;
(c) Meeting with the Alberta Building Standards Council to discuss topics of common concern;
(d) Attendance by four members at a one-day seminar entitled "Designing for Fire Safety" sponsored by the National Research Council; and
(e) Meeting with the Assistant Deputy Minister of Labour, General Safety Services Division, to review the organization and operations of the Division.

As of December 31, 1987 the membership of the Council was:

Harry Dowhan – Chairman
Martin Chapman – 1st Vice-chairman
Douglas Kometz – 2nd Vice-chairman

Raymond Caouette	Keith Gilker
Jack Edworthy	Donald Goedbloed
Ronald Faulkner	Wayne Stanyer
Roger Field	Allen Stephanson

As of April 1, 1987 the structure of the Council was amended to provide for a second Vice-chairman.

Comparative Statistical Summary

for the three years ending March 31, 1986, 1987 and 1988

A. Fire Prevention	1985-86 No.	1986-87 No.	1987-88 No.
Building fire inspections conducted by Branch	2,641	2,939	2,930
Building fire inspections conducted by other agencies*	—	—	46
- Recommendations issued to correct hazards	8,793	10,261	9,608
- Orders issued by Branch*	13	74	23
- Orders issued by other agencies**	—	—	199
Plans examined	282	208	237
Meetings and lectures conducted	1,588	1,626	1,307
- Attendance	19,056	20,390	3,978
Fire Prevention Council Appeal Hearings	39	69	22
B. Fire Investigation			
Investigations conducted by Branch	319	378	379
Investigations by other agencies	633	735	791
Total	**952**	**1,113**	**1,170**
Causes of Fires Investigated			
- arson	642	826	856
- accidental or unknown	326	283	310
- under investigation	8	4	4
Total	**976**	**1,113**	**1,170**
C. Fire Service Personnel Training	**Attendance**		
Alberta Fire Training School Municipal Training Programs			
Course Title (Duration 44 hrs.) Part I Firefighter	154	130	132
Part II Firefighter	125	98	96
Part III Firefighter	43	40	43
Part IV Firefighter	37	31	32
Part V Firefighter	40	34	31
Part VI Firefighter	20	21	21
Pump Operator "A"	111	90	88
Pump Operator "B"	22	29	21
Fire Prevention for the Firefighter	18	20	15
Vehicle Extrication & Trench Rescue	20	20	20
Dangerous Goods Incident Control	—	—	31***
Trench Rescue	—	—	13***
Fire Officer C1, Building Construction	20	16	12
Fire Officer C2, Leadership	20	17	12
Fire Officer C3, Pre-emergency Planning	18	10	11
Fire Officer C4, Fire Suppression and Safety	17	11	12
Fire Officer C5, Strategy and Tactics (Theory)	18	39	34
Fire Officer C6, Strategy and Tactics (Practical)	12	13	10
Fire Officer C7, Fire Investigation	20	18	20
Fire Officer C8, Fire Prevention - Fire Protection Equipment	14	8	9
Fire Officer C9, Fire Prevention - Inspection and Public Education	17	11	7
Fire Officer C10, Human Relations and Management	—	—	17***
Fire Officer C12, Technical Writing Skills	—	32	13
Fire Officer C15, Public Relations and Public Speaking	—	32	13
Fire Prevention Officer DA,*** Building Codes & Standards	18	17	24
Fire Inspector DB, Alberta Fire Code	19	21	20
Fire Inspector D1, Water Supply	8	10	5
Fire Inspector D2, Sprinkler and Standpipe and Hose Systems	11	10	14
Fire Services Instructor E1	20	24	31
Fire Services Instructor E2	13	12	19
Fire Services Instructor E3	—	9	10
Total Municipal Fire Department Personnel Attending A.F.T.S.	**835**	**823**	**836**

Comparative Statistical Summary (cont'd)

for the three years ending March 31, 1985, 1986 and 1987

	1985-86 No.	1986-87 No.	1987-88 No.
C. Fire Service Personnel Training (Cont.)	**Attendance**		
Extension Courses - Municipal Presentation			
Course Title (Duration 44 hrs.) Part I Firefighter	266	319	287
Part II Firefighter	48	104	102
Pump Operator "A"	5	42	13
Fire Prevention for the Firefighter	24	32	59
Vehicle Extrication	—	—	25***
Fire Officer C2, Leadership	—	44	19
Fire Officer C3, Pre-emergency Planning	—	—	14
Fire Officer C5, Strategy and Tactics (Theory)	—	19	—
Fire Officer C7, Fire Investigation	20	93	72
Fire Officer C8, Fire Protection Equipment	—	—	22
Fire Officer C9, Fire Prevention	23	9	—
Fire Officer C12, Technical Writing Skills	—	32	12
Fire Officer C15, Public Relations and Public Speaking	—	—	36
Fire Inspector DA, Building Codes & Standards	50	—	—
Fire Inspector DB, Alberta Fire Code	57	12	—
Fire Inspector D2, Sprinkler & Standpipe and Hose Systems	—	59	12
Fire Services Instructor E1	48	—	11
Personnel Attending A.F.T.S. Sponsored Extension and Local Courses	541	765	684
Total Municipal Fire Department Personnel	**1,376**	**1,588**	**1,520**
Industrial Programs			
Course Title (Duration as indicated)			
Part I Industrial Firefighter (16 hrs.)	195	138	100
Part IA Industrial Firefighter (8 hrs.)	149	104	123
Part IB Industrial Firefighter (16 hrs.)	23	58	85
Part II Industrial Firefighter (16 hrs.)	140	104	81
Part III Industrial Firefighter (16 hrs.)	89	62	75
Aircraft Crash/Fire Response - Dry Chemical	—	11	—
Total Industrial Fire Department Personnel	**596**	**477**	**464**
Grand Total Attendance at A.F.T.S. Sponsored Courses	1,972	2,065	1,984
One-day Seminars	43	45	84
Two-day Seminars	—	21	—

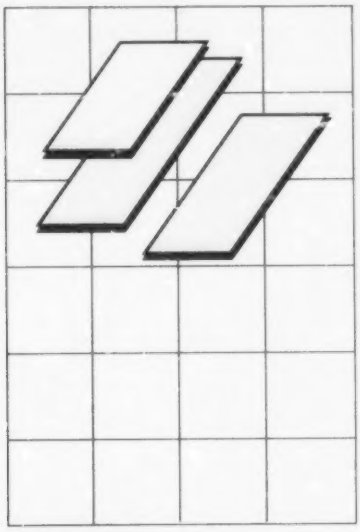
* This number only reflects inspection reports submitted to the Branch for input into the Fire Inspection Reporting System (FIRS).

** Previous reports listed only the number of orders issued by the Branch.

*** These courses were offered for the first time in 1987/88.

**** These courses were previously titled Fire Prevention Officer.

SECTION 1



Alberta Fire Casualties

Fire Commissioner's
Statistical Report

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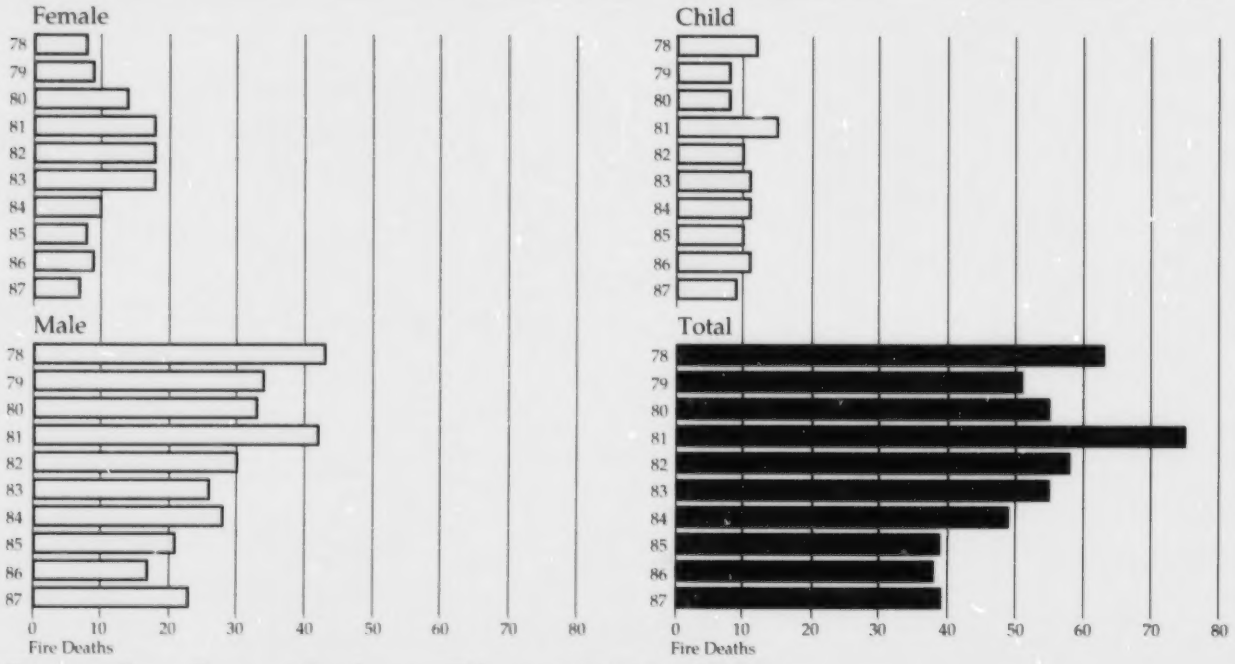
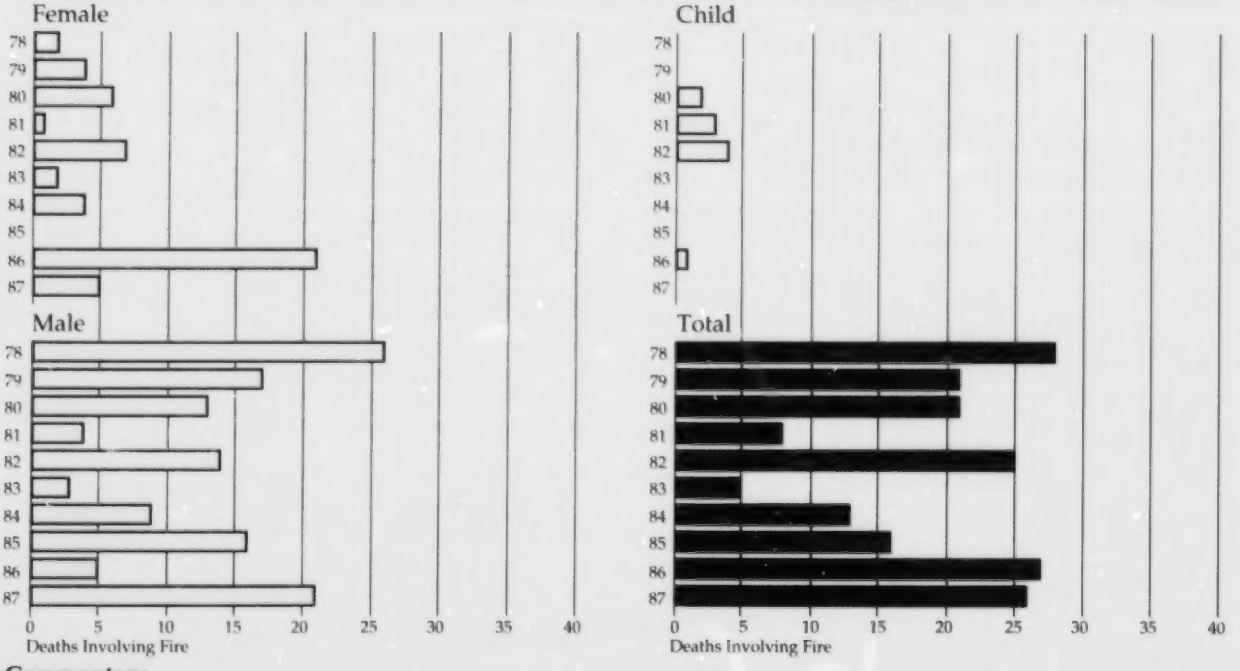
Fire Deaths 1978-1987



Deaths Involving Fire 1978-1987

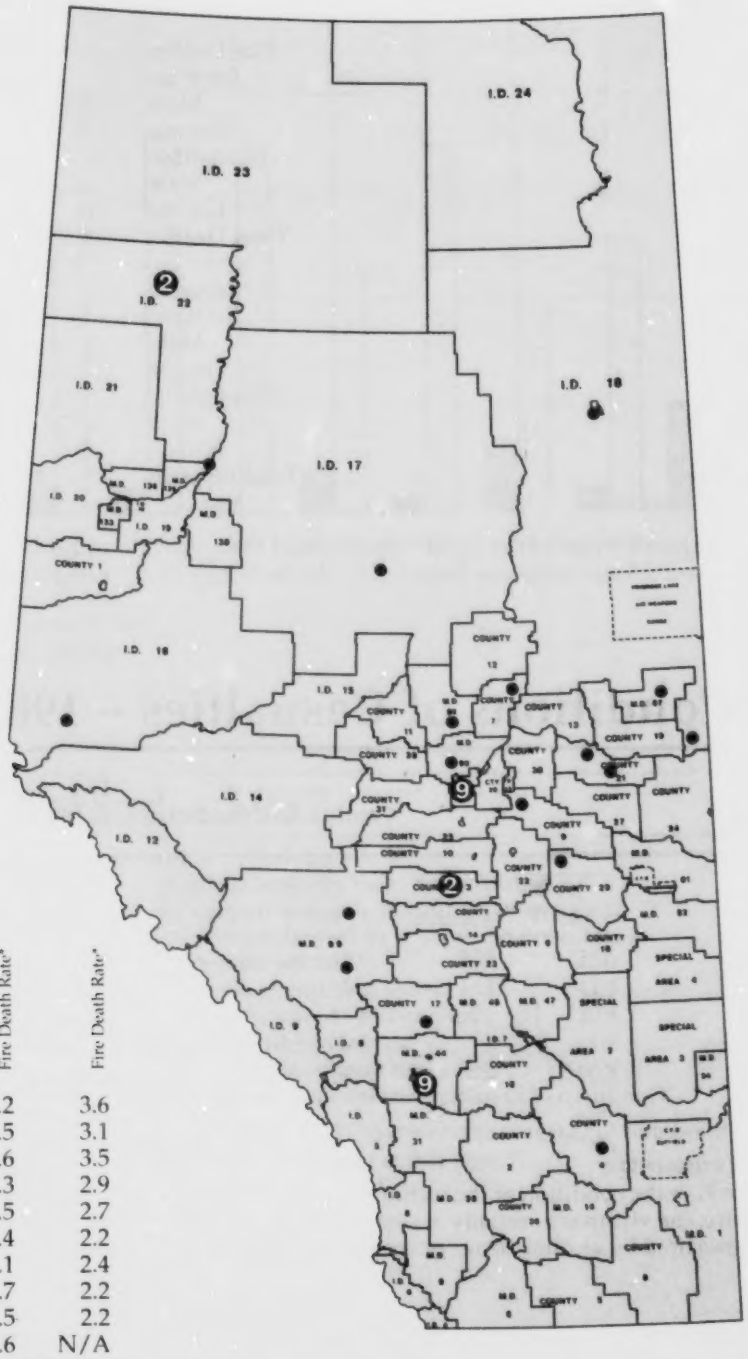


Commentary

Fire deaths refer to persons who died directly as a result of a fire, either by smoke inhalation or burns. Deaths involving fire refer to persons who were in a place where a fire occurred, but who may have died from a cause other than the fire itself (e.g. a person who dies in an automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing).

Fire Deaths by Geographic Location – 1987

- Represents One Death
- ❷ Represents Specified Number of Deaths



Death Rates

Year	Population	Fire Deaths	Other Deaths Involving Fire	Total Deaths	Fire Death Rate*	Fire Death Rate*
1978	1,954,000	63	28	91	3.2	3.6
1979	2,014,000	51	21	72	2.5	3.1
1980	2,146,000	55	21	76	2.6	3.5
1981	2,278,000	75	8	83	3.3	2.9
1982	2,332,000	58	25	83	2.5	2.7
1983	2,336,000	55	5	60	2.4	2.2
1984	2,346,000	49	13	62	2.1	2.4
1985	2,318,000	39	16	55	1.7	2.2
1986	2,399,000	37	27	64	1.5	2.2
1987	2,402,000	39	26	65	1.6	N/A
		Alberta				Canada

*Deaths per 100,000 population

Casualties by Age and Sex – 1987

Casualty	Age in Years									
	0-5	6-15	16-25	26-35	36-45	46-55	56-65	Over 65	Unknown	Total
Fire Deaths										
Civilian:										
Male	5	1	9	4	3	2	2	2	0	28
Female	3	0	1	2	2	1	0	1	0	10
Firefighter:										
Male	0	0	0	0	0	1	0	0	0	1
Female	0	0	0	0	0	0	0	0	0	0
Total Deaths	**8**	**1**	**10**	**6**	**5**	**4**	**2**	**3**	**0**	**39**
Injuries										
Civilian:										
Male	2	9	48	45	22	19	12	8	36	201
Female	7	10	18	15	9	5	5	8	14	91
Firefighter:										
Male	0	0	6	39	29	6	0	0	2	82
Female	0	0	1	0	1	0	0	0	0	2
Total Injuries	**9**	**19**	**73**	**99**	**61**	**30**	**17**	**16**	**52**	**376**

Commentary

The greatest number of fire deaths occurred in the 16-25 and 0-5 age categories followed by the 26-35 age category. Injuries were greatest in the 26-35 age category.

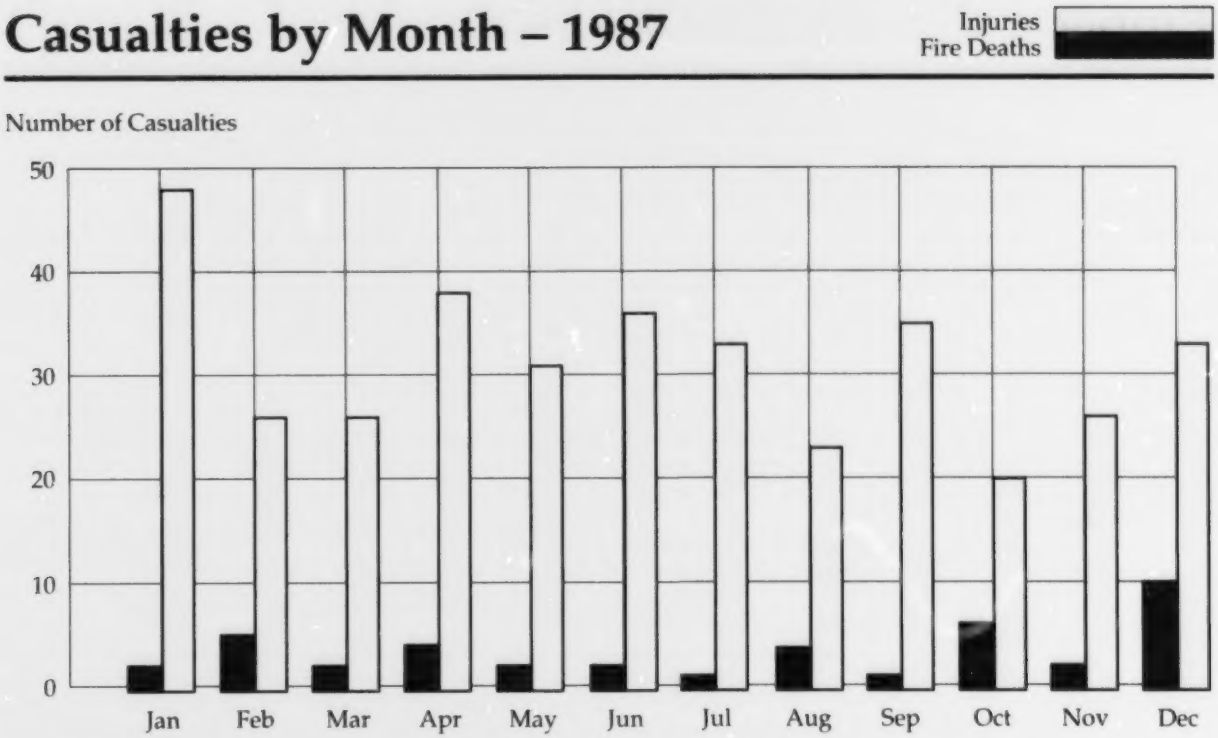
Conditions of Casualties – 1987

Condition of Casualty	Fire Deaths	% Of Total	Injuries	% Of Total
Asleep at time of fire	8	20.5	49	13.0
Bedridden or other physical handicap	0	0	2	.5
Impairment by alcohol, drugs or medication	11	28.2	25	6.6
Awake and no physical or mental impairment at the time of fire	8	20.5	268	71.3
Under restraint or detention	0	0	0	0
Too young to react to fire emergency	3	7.7	2	.5
Mental handicap (senile)	0	0	1	.3
Left unattended (children)	1	2.6	2	.5
Condition of casualty - unclassified or unknown	8	20.5	27	7.2
Total	**39**	**100.0**	**376**	**99.9**

Commentary

Where the condition of the victim was known in a fatal fire, the victim was usually asleep at the time of fire or impaired by alcohol, drugs or medication. The most common known factor for the injured victim was that he was awake and had no physical or mental impairment at the time of fire.

Casualties by Month – 1987



Commentary

The number of fire deaths per month is highest in the month of December. January recorded the highest number of injuries.

Casualties by Time Period – 1987

Time Period	Fire Deaths	% Of Total	Injuries	% Of Total
6:31 a.m. - 2:30 p.m.	16	41.0	139	37.0
2:31 p.m. - 10:30 p.m.	6	15.4	154	41.0
10:31 p.m. - 6:30 a.m.	16	41.0	77	20.5
Unknown	1	2.6	6	1.6
Total	**39**	**100.0**	**376**	**100.1**

Commentary

The percentage number of deaths between 2:31 p.m. and 10:30 p.m. was significantly lower than the other two time periods; however, the percentage number of injuries was highest at this time.

Fire Deaths by Major Property Classifications – 1987

Property Classification		Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Assembly					
	Theatre, Studio, Auditorium	0	—	0	—
	Amusement, Recreation Place	0	—	0	—
	School, College, University	0	—	0	—
	Church, Funeral Parlour	0	—	0	—
	Clubs, Social, Sport	0	—	0	—
	Museum, Art Gallery, Library	0	—	0	—
	Food or Beverage Establishment	0	—	0	—
	Passenger Terminal, Station	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	**—**	**0**	**—**
Institutional					
	Prison, Jail, Reformatory	0	—	0	—
	Home for the Aged	0	—	0	—
	Child Care	0	—	0	—
	Hospital, Sanatorium, Clinic	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	**—**	**0**	**—**
Residential					
	One and Two Family Dwellings	15	38.5	3	11.5
	Apartment, Tenement	13	33.3	0	—
	Rooming, Boarding House	0	—	0	—
	Hotel	0	—	0	—
	Motor Hotel	0	—	0	—
	Dormitory	0	—	0	—
	Mobile Home, Trailer	7	17.9	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**35**	**89.7**	**3**	**11.5**
Business and Personal Service					
	Office	0	—	0	—
	Personal Service	0	—	0	—
	Electronic Equipment	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	**—**	**0**	**—**
Mercantile					
	Food, Beverage Sale	0	—	0	—
	Textile, Wearing Apparel Sale	0	—	0	—
	Furniture, Appliance, Hardware Sales	0	—	0	—
	Books, Newspapers, Drugs, Specialties	0	—	0	—
	Recreation, Hobby Supplies	0	—	0	—
	Repair Shop, Laundry, Dry Cleaner	0	—	0	—
	Motor Vehicles, Boats, Sales and Service	0	—	0	—
	Department, Variety Store	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	**—**	**0**	**—**

– Continued on next page –

Fire Deaths by Major Property Classifications – 1987 (cont'd)

Property Classification	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Industrial Manufacturing Properties				
Chemicals, Petroleum, Paints, Plastics	0	—	1	3.8
Wood, Furniture, Paper, Printing	0	—	0	—
Metal, Metal Products, Electrical Equipment and Appliances	0	—	0	—
Food Processing	0	—	0	—
Beverage, Tobacco, Soap, Margarine	0	—	0	—
Textiles	0	—	0	—
Wearing Apparel, Footwear	0	—	0	—
Vehicles and Related Equipment	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**0**	**—**	**1**	**3.8**
Storage Properties				
Agricultural Products	0	—	0	—
Textiles, Fibres, Clothing	0	—	0	—
Processed Food, Beverage	0	—	0	—
Flammable Liquids, Gases, Petroleum Products	0	—	0	—
Wood, Furniture, Paper and Products	0	—	0	—
Chemicals, Plastics, Paints	0	—	0	—
Metal Products, Machinery, Electrical Appliance	0	—	0	—
Vehicle	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**0**	**—**	**0**	—
Special Property - Transportation Equipment				
Outdoor Property	0	—	1	3.8
Special Connecting Thoroughfares	0	—	0	—
Under Construction/Demolition: Vacant	0	—	0	—
Watercraft	0	—	0	—
Rail Transport Vehicle and Equipment	0	—	0	—
Ground Transport Vehicle	3	7.7	16	61.5
Aircraft	0	—	4	15.4
Special Vehicles	0	—	0	—
Other Special Property	0	—	0	—
Sub-Total	**3**	**7.7**	**21**	**80.8**
Miscellaneous Property				
Laboratories	0	—	0	—
Farm Facilities	1	2.6	0	—
Miscellaneous Outbuildings	0	—	0	—
Utility	0	—	0	—
Cement, Glass, Pottery Manufacturing	0	—	0	—
Mining, Quarrying	0	—	1	3.8
Communications	0	—	0	—
Nucleonics	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**1**	**2.6**	**1**	**3.8**
Total	**39**	**100.0**	**26**	**99.9**

Commentary

90% of fire deaths occurred in residential properties.

Injuries by Major Property Classifications – 1987

Property Classification	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Assembly					
Theatre, Studio, Auditorium	1	0	0	1	.3
Amusement, Recreation Place	0	2	0	2	.5
School, College, University	6	0	0	6	1.6
Church, Funeral Parlour	1	0	0	1	.3
Clubs, Social, Sport	0	0	0	0	—
Museum, Art Gallery, Library	0	0	0	0	—
Food or Beverage Establishment	4	6	0	10	2.7
Passenger Terminal, Station	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**12**	**8**	**0**	**20**	**5.3**
Institutional					
Prison, Jail, Reformatory	0	0	0	0	—
Home for the Aged	0	1	0	1	.3
Child Care	0	0	0	0	—
Hospital, Sanatorium, Clinic	1	1	0	2	.5
Miscellaneous	0	0	0	0	—
Sub-Total	**1**	**2**	**0**	**3**	**.8**
Residential					
One and Two Family Dwellings	70	33	23	126	33.5
Apartment, Tenement	41	10	7	58	15.4
Rooming, Boarding House	1	1	0	2	.5
Hotel	0	0	4	4	1.1
Motor Hotel	0	0	0	0	—
Dormitory	1	0	1	2	.5
Mobile Home, Trailer	17	10	1	28	7.4
Miscellaneous	0	0	0	0	—
Sub-Total	**130**	**54**	**36**	**220**	**58.5**
Business and Personal Service					
Office	1	1	0	2	.5
Personal Service	0	0	0	0	—
Electronic Equipment	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**1**	**1**	**0**	**2**	**.5**
Mercantile					
Food, Beverage Sale	2	0	0	2	.5
Textile, Wearing Apparel Sale	0	0	0	0	—
Furniture, Appliance, Hardware Sales	0	7	0	7	1.9
Books, Newspapers, Drugs, Specialties	0	0	0	0	—
Recreation, Hobby Supplies	2	0	0	2	.5
Repair Shop, Laundry, Dry Cleaner	0	0	0	0	—
Motor Vehicles, Boats, Sales and Service	6	3	0	9	2.4
Department, Variety Store	3	0	0	3	.8
Miscellaneous	0	0	0	0	—
Sub-Total	**13**	**10**	**0**	**23**	**6.1**

– Continued on next page –

Injuries by Major Property Classifications – 1987 (cont'd)

Property Classification	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Industrial Manufacturing Properties					
Chemicals, Petroleum, Paints, Plastics	1	2	1	4	1.1
Wood, Furniture, Paper, Printing	4	0	0	4	1.1
Metal, Metal Products, Electrical Equipment and Appliances	1	1	0	2	.5
Food Processing	0	2	0	2	.5
Beverage, Tobacco, Soap, Margarine	0	0	0	0	—
Textiles	0	0	0	0	—
Wearing Apparel, Footwear	0	0	0	0	—
Vehicles and Related Equipment	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**6**	**5**	**1**	**12**	**3.2**
Storage Properties					
Agricultural Products	1	0	0	1	.3
Textiles, Fibres, Clothing	0	0	0	0	—
Processed Food, Beverage	0	0	0	0	—
Flammable Liquids, Gases, Petroleum Products	1	0	0	1	.3
Wood, Furniture, Paper and Products	1	1	0	2	.5
Chemicals, Plastics, Paints	0	1	0	1	.3
Metal Products, Machinery, Electrical Appliance	0	0	0	0	—
Vehicle	8	7	2	17	4.5
Miscellaneous	0	0	2	2	.5
Sub-Total	**11**	**9**	**4**	**24**	**6.4**
Special Property					
Outdoor Property	14	8	0	22	5.9
Special Connecting Thoroughfares	0	0	0	0	—
Under Construction/Demolition: Vacant	1	3	0	4	1.1
Watercraft	0	0	0	0	—
Rail Transport Vehicle and Equipment	0	0	0	0	—
Ground Transport Vehicle	14	14	4	32	8.5
Aircraft	0	0	0	0	—
Special Vehicles	0	3	0	3	.8
Other Special Property	0	0	0	0	—
Sub-Total	**29**	**28**	**4**	**61**	**16.2**
Miscellaneous Property					
Laboratories	0	0	0	0	—
Farm Facilities	0	1	0	1	.3
Miscellaneous Outbuildings	0	0	0	0	—
Utility	4	1	0	5	1.3
Cement, Glass, Pottery Manufacturing	0	0	0	0	—
Mining, Quarrying	0	1	1	2	.5
Communications	0	0	0	0	—
Nucleonics	0	0	0	0	—
Miscellaneous	1	1	1	3	.8
Sub-Total	**5**	**4**	**2**	**11**	**2.9**
Total	**208**	**121**	**47**	**376**	**99.9**

Commentary

59% of injuries occurred in residential properties.

Fire Deaths by Act or Omission – 1987

Act or Omission	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Incendiary				
Arson – for fraudulent purposes	0	—	0	—
Arson – for vengeful/spiteful purposes	0	—	0	—
Arson – for obscuring other crime	0	—	0	—
Arson – to satisfy compulsive desires (pyromania)	0	—	0	—
Suspected Arson	2	5.1	0	—
Riot, Civil Commotion, Charges Laid	0	—	0	—
Riot, Civil Commotion, No Charges Laid	0	—	0	—
Vandalism, Mischief, Charges Laid	0	—	0	—
Vandalism, Mischief, No Charges Laid	0	—	0	—
Incendiary, Unclassified	0	—	2	7.7
Sub-Total	**2**	**5.1**	**2**	**7.7**
Misuse of Source of Ignition				
Smoker's Material	7	17.9	0	—
Thawing	0	—	0	—
Inadequate Control of "Open" Fire	1	2.6	1	3.8
Child Playing With	8	20.5	0	—
Welding or Cutting Too Close To	0	—	1	3.8
Torch Too Close To	0	—	0	—
Misuse of Source of Ignition, Unclassified	0	—	0	—
Sub-Total	**16**	**41.0**	**2**	**7.7**
Misuse of Material Ignited				
Fuel Spilled Accidentally	0	—	0	—
Improper Fuelling Technique	0	—	0	—
Flammable Liquid to Kindle Fire	0	—	0	—
Cleaning, Washing Parts	0	—	0	—
Improper Container	0	—	0	—
Overheated Cooking Oil, Grease, Wax	2	5.1	0	—
Combustible Placed Too Close to Heat	0	—	0	—
Improper Storage	0	—	0	—
Misuse of Material Ignited, Unclassified	0	—	0	—
Sub-Total	**2**	**5.1**	**0**	**—**
Mechanical, Electrical Failure, Malfunction				
Part Failure, Leak, Break	2	5.1	0	—
Automatic Control Failure	0	—	0	—
Manual Control Failure	0	—	0	—
Electrical Short Circuit	3	7.7	0	—
Part Worn Out	0	—	0	—
Mechanical, Electrical Failure, Unclassified	0	—	0	—
Sub-Total	**5**	**12.8**	**0**	**—**

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Fire Deaths by Act or Omission – 1987 (cont'd)

Act or Omission	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Construction, Design or Installation Deficiency				
Design Deficiency	0	—	0	—
Construction Deficiency	0	—	0	—
Installed Too Close to Combustible	2	5.1	0	—
Other Installation Deficiency	0	—	0	—
Over Fusing	0	—	0	—
Suspected Faulty Connections/Aluminum Wiring	0	—	0	—
Suspected Faulty Connections/Copper Wiring	0	—	0	—
Construction, Design or Installation Deficiency, Unclassified	0	—	0	—
Sub-Total	**2**	**5.1**	**0**	**—**
Misuse of Equipment				
Overfuelling	0	—	0	—
Misuse of Equipment, Unclassified	0	—	0	—
Sub-Total	**0**	**—**	**0**	**—**
Human Failing				
Asleep	1	2.6	0	—
Temporary Loss of Judgement	0	—	0	—
Physical or Mental Disability	0	—	1	3.8
Accident	0	—	0	—
Suspected Impairment by Alcohol, Drugs, Medication	0	—	0	—
Asleep - Suspected Use of Alcohol, Drugs, Medication	1	2.6	0	—
Ignorance of Hazard	0	—	0	—
Distracted, Preoccupied	0	—	0	—
Human Failing, Unclassified	1	2.6	0	—
Sub-Total	**3**	**7.7**	**1**	**3.8**
Vehicle Accident				
Automobile	0	—	12	46.2
Industrial Truck	0	—	1	3.8
Other Road Vehicle	0	—	1	3.8
Rail Vehicle	0	—	0	—
Watercraft	0	—	0	—
Aircraft	0	—	4	15.4
Vehicle Accident, Unclassified	0	—	1	3.8
Sub-Total	**0**	**—**	**19**	**73.1**
Miscellaneous				
Miscellaneous, Unclassified	0	—	1	3.8
Act or Omission - Cannot be Determined	9	23.1	1	3.8
Sub-Total	**9**	**23.1**	**2**	**7.7**
Total	**39**	**99.9**	**26**	**100.0**

Commentary
Child playing with a source of ignition was the leading cause of fatal fires followed by misuse of smoker's material.

Injuries by Act or Omission – 1987

Act or Omission	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Incendiary					
Arson – for fraudulent purposes	0	1	0	1	.3
Arson – for vengeful/spiteful purposes	1	0	1	2	.5
Arson – for obscuring other crime	0	0	1	1	.3
Arson – to satisfy compulsive desires (pyromania)	0	2	0	2	.5
Suspected Arson	2	1	3	6	1.6
Riot, Civil Commotion, Charges Laid	0	0	0	0	—
Riot, Civil Commotion, No Charges Laid	0	0	0	0	—
Vandalism, Mischief, Charges Laid	0	0	0	0	—
Vandalism, Mischief, No Charges Laid	0	3	0	3	.8
Incendiary, Unclassified	2	3	0	5	1.3
Sub-Total	**5**	**10**	**5**	**20**	**5.3**
Misuse of Source of Ignition					
Smoker's Material	29	16	0	45	12.0
Thawing	0	0	0	0	—
Inadequate Control of "Open" Fire	7	2	0	9	2.4
Child Playing With	13	7	5	25	6.6
Welding or Cutting Too Close To	2	5	0	7	1.9
Torch Too Close To	4	0	0	4	1.1
Misuse of Source of Ignition, Unclassified	0	0	0	0	—
Sub-Total	**55**	**30**	**5**	**90**	**23.9**
Misuse of Material Ignited					
Fuel Spilled Accidentally	7	5	1	13	3.5
Improper Fuelling Technique	0	3	0	3	.8
Flammable Liquid to Kindle Fire	0	1	2	3	.8
Cleaning, Washing Parts	6	1	1	8	2.1
Improper Container	0	1	0	1	.3
Overheated Cooking Oil, Grease, Wax	34	8	4	46	12.2
Combustible Placed Too Close to Heat	5	2	0	7	1.9
Improper Storage	2	0	0	2	.6
Misuse of Material Ignited, Unclassified	0	0	2	2	.6
Sub-Total	**54**	**21**	**10**	**85**	**22.6**
Mechanical, Electrical Failure, Malfunction					
Part Failure, Leak, Break	15	4	1	20	5.3
Automatic Control Failure	1	0	2	3	.8
Manual Control Failure	0	0	0	0	—
Electrical Short Circuit	7	2	0	9	2.4
Part Worn Out	1	0	0	1	.3
Mechanical, Electrical Failure, Unclassified	4	2	4	10	2.7
Sub-Total	**28**	**8**	**7**	**43**	**11.4**
Construction, Design or Installation Deficiency					
Design Deficiency	0	1	0	1	.3
Construction Deficiency	0	0	0	0	—
Installed Too Close to Combustible	1	1	0	2	.5
Other Installation Deficiency	0	0	1	1	.3
Over Fusing	0	0	0	0	—
Suspected Faulty Connections/Aluminum Wiring	0	0	0	0	—
Suspected Faulty Connections/Copper Wiring	0	0	0	0	—
Construction, Design or Installation Deficiency, Unclassified	0	0	0	0	—
Sub-Total	**1**	**2**	**1**	**4**	**1.1**

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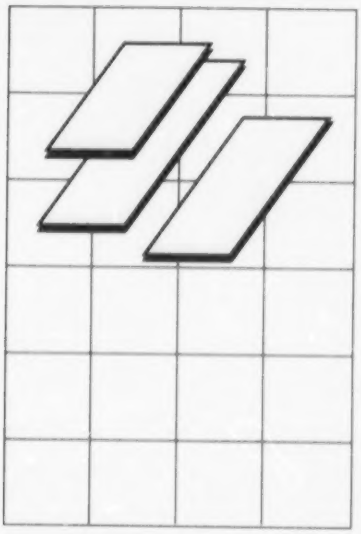
Injuries by Act or Omission – 1987 (cont'd)

Act or Omission	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Misuse of Equipment					
Overfuelling	0	0	0	0	—
Misuse of Equipment, Unclassified	0	0	0	0	—
Sub-Total	**0**	**0**	**0**	**0**	—
Human Failing					
Asleep	0	1	0	1	.3
Temporary Loss of Judgement	1	1	0	2	.5
Physical or Mental Disability	1	1	0	2	.5
Accident	2	0	0	2	.5
Suspected Impairment by Alcohol, Drugs, Medication	14	4	0	18	4.8
Asleep – Suspected Use of Alcohol, Drugs, Medication	8	3	1	12	3.2
Ignorance of Hazard	15	11	8	34	9.0
Distracted, Preoccupied	0	1	0	1	.3
Human Failing, Unclassified	2	7	0	9	2.4
Sub-Total	**43**	**29**	**9**	**81**	**21.5**
Vehicle Accident					
Automobile	3	4	1	8	2.1
Industrial Truck	0	0	0	0	—
Other Road Vehicle	0	0	0	0	—
Rail Vehicle	0	0	0	0	—
Watercraft	0	0	0	0	—
Aircraft	0	0	0	0	—
Vehicle Accident, Unclassified	0	0	0	0	—
Sub-Total	**3**	**4**	**1**	**8**	**2.1**
Miscellaneous					
Miscellaneous, Unclassified	6	2	0	8	2.1
Act or Omission – Cannot be Determined	13	15	9	37	9.8
Sub-Total	**19**	**17**	**9**	**45**	**12.0**
Total	**208**	**121**	**47**	**376**	**99.9**

Commentary
Overheated cooking oil was the leading cause of fires where injuries occurred, followed by misuse of smoker's material.

SECTION 2



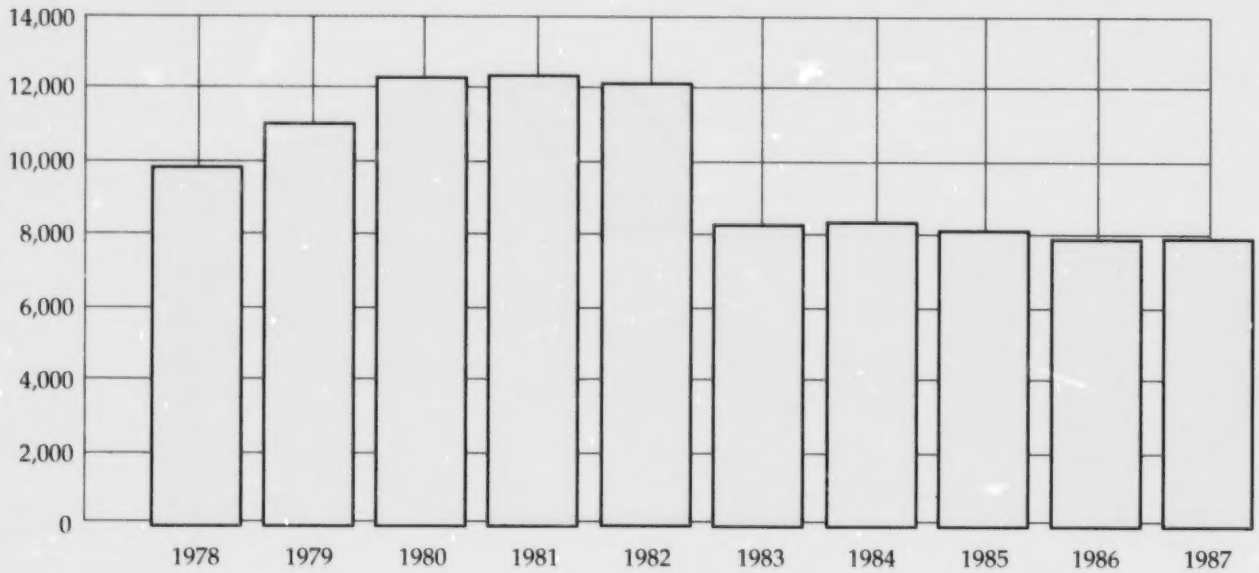
Alberta Fire Loss Information

Fire Commissioner's
Statistical Report

1 9 8 7

Fires and Losses 1978-1987

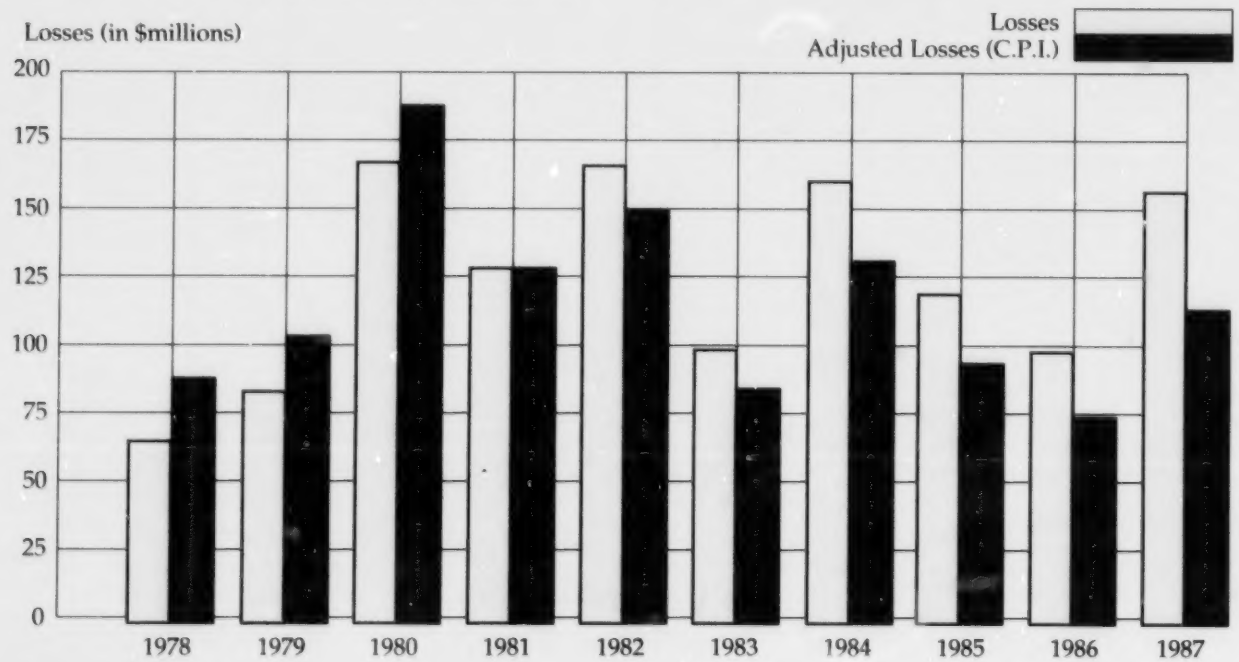
Number of Fires



Commentary

The number of fires has decreased by 18.6% from 1978 to 1987. Grass fires were not included in 1983 to 1987 as they were in previous years. If they had been included, fires in 1983 would have been 10,210; in 1984 – 10,193; in 1985 – 9,200; in 1986 – 8,666 and in 1987 – 9,223.

Losses (in $millions)



Commentary

Losses have increased 140% between 1978 and 1987 and adjusted losses have increased 29%.

Fire Rates and Per Capita Losses 1978-1987

Year	Population*	Number Of Fires	Fire Rate**	Loss Estimate	Loss Per Capita
1978	2,011,000	9,683	4.8	65,264,664	32.45
1979	2,085,000	11,162	5.4	83,067,224	39.84
1980	2,180,000	12,564	5.8	167,349,508	76.77
1981	2,267,000	12,659	5.6	128,600,499	56.73
1982	2,345,000	12,191	5.2	166,471,418	70.99
1983	2,366,000	8,484 ***	3.6	98,721,125	41.72
1984	2,358,000	8,549 ***	3.6	160,703,729	68.15
1985	2,338,000	8,145 ***	3.5	119,383,723	51.06
1986	2,372,000	7,766 ***	3.3	97,917,114	41.28
1987	2,380,000	7,878 ***	3.3	156,917,168	65.93
Average (1978-1987)		9,908		124,439,617	

* As published by Alberta Quarterly Growth, 4th Quarterly, Alberta Bureau of Statistics

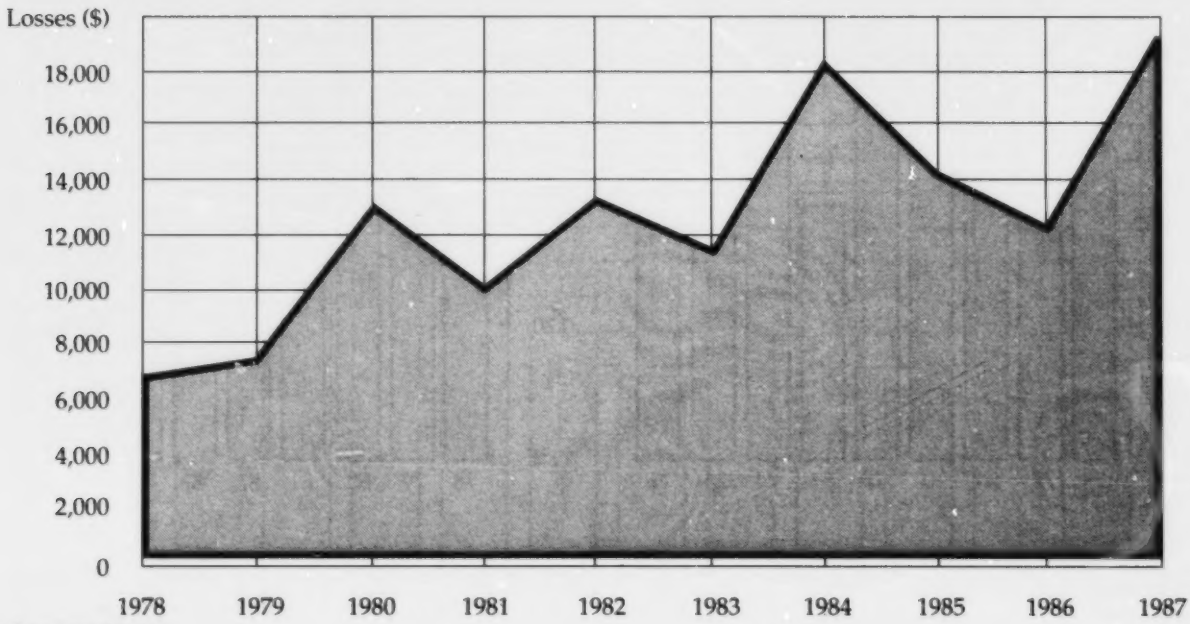
** Number of fires per 1,000 population

*** These numbers do not include 1,797 grass fires where no losses occurred in 1983, 1,625 grass fires in 1984, 1,212 grass fires in 1985, 949 grass fires in 1986 and 1,345 grass fires in 1987.

Commentary

From 1978 to 1987, Alberta's population increased 18%, the number of fires decreased by 19%, the loss estimate increased 140%, and the loss per capita increased 103%. Between 1986 and 1987 the number of fires increased by 1.4% and the losses increased by 60%. 85% of the increase was due to one fire with an estimated loss of $50,000,000.

Average Loss Per Fire 1978-1987



Commentary

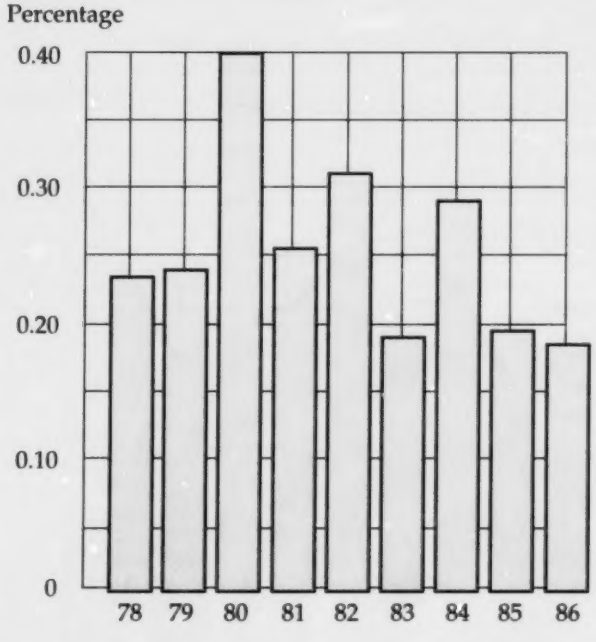
The average loss per fire increased by 196% from 1978 to 1987.

Fire Losses Related to Economic Indices 1978-1987

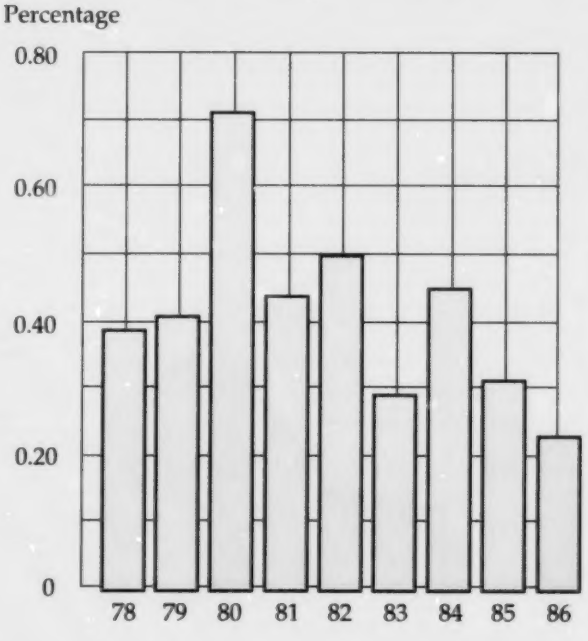
Year	Fire Losses (in $ Millions)	Gross Domestic Product		Personal Income	
		Gross Domestic Product* (in $ Millions)	% Of Gross Domestic Product	Personal Income* (in $ Millions)	% Of Personal Income
1978	65.3	28,315	.23	16,610	.39
1979	83.1	35,045	.24	19,865	.41
1980	167.3	42,021	.40	23,658	.71
1981	128.6	49,037	.26	29,170	.44
1982	166.5	52,838	.32	33,054	.50
1983	98.7	54,812	.18	34,442	.29
1984	160.7	57,458	.28	35,840	.45
1985	119.4	62,009	.19	38,762	.31
1986	97.9	56,439	.17	42,366	.23
1987	156.9	N/A	—	N/A	—

* Alberta Economic Accounts, 1986

Fire Losses As A Percentage of Gross Domestic Product

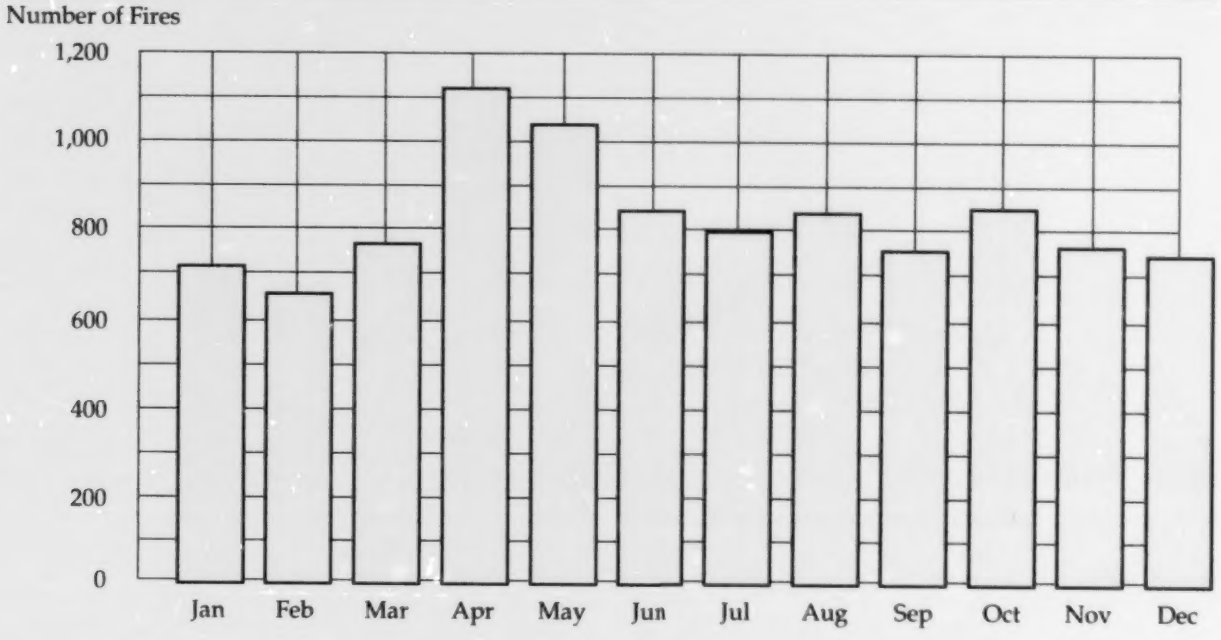


Fire Losses As A Percentage of Personal Income

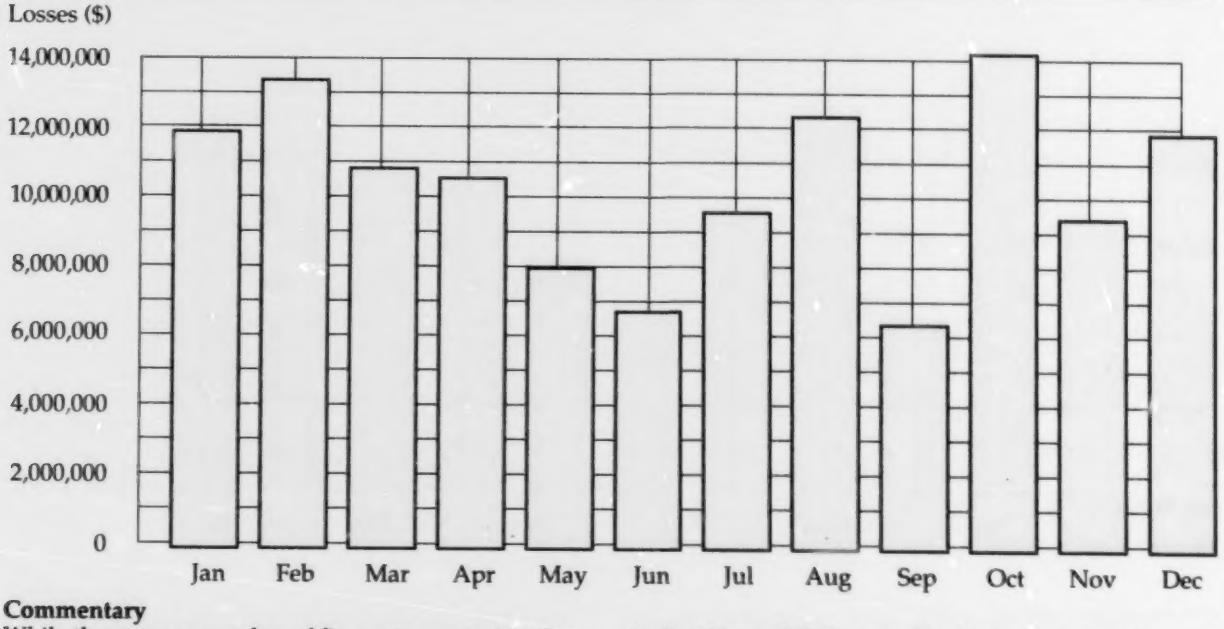


Commentary
As a percentage of gross domestic product, fire losses have decreased 26% between 1978 and 1986. As a percentage of personal income, fire losses decreased 41% during the same time period.

Average Number of Fires by Month 1978-1987



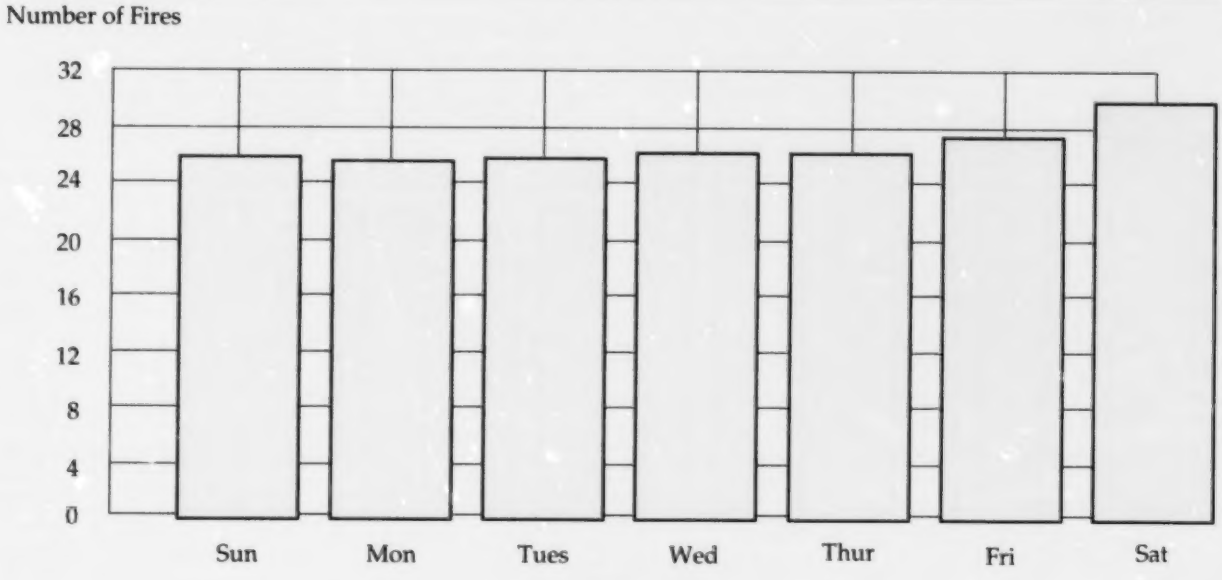
Average Fire Loss by Month 1978-1987



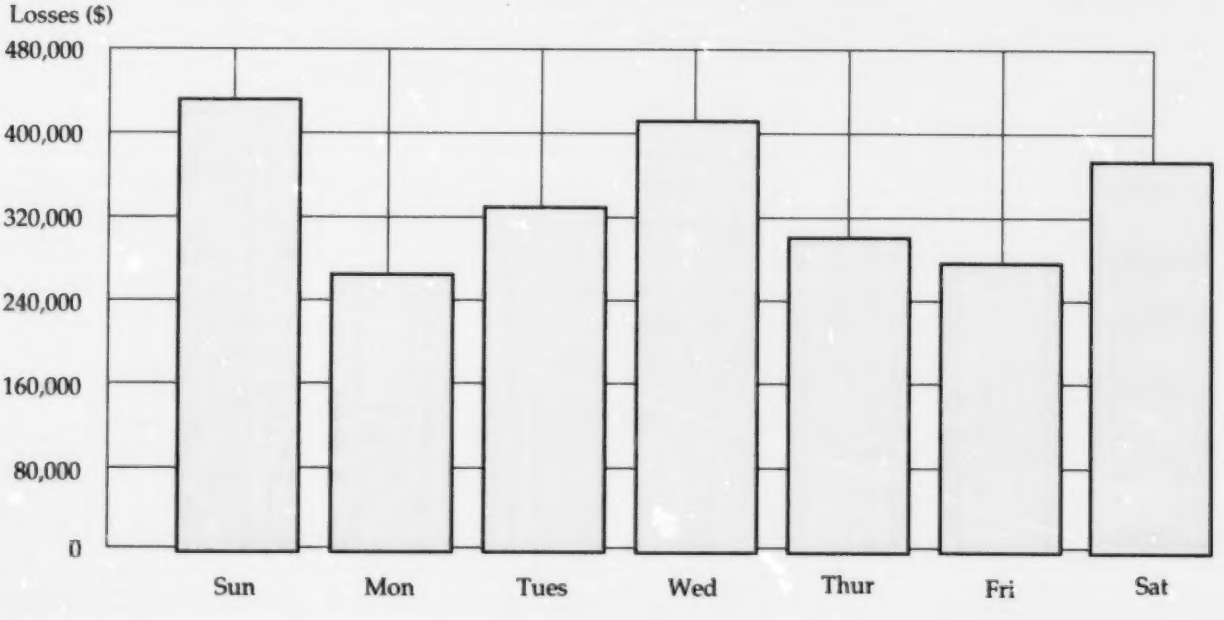
Commentary

While the average number of fires was greatest in the months of April and May, average losses were highest in October and February. The highest average loss per fire per month ($20,219) was in February.

Average Number of Fires by Day of Week 1978-1987

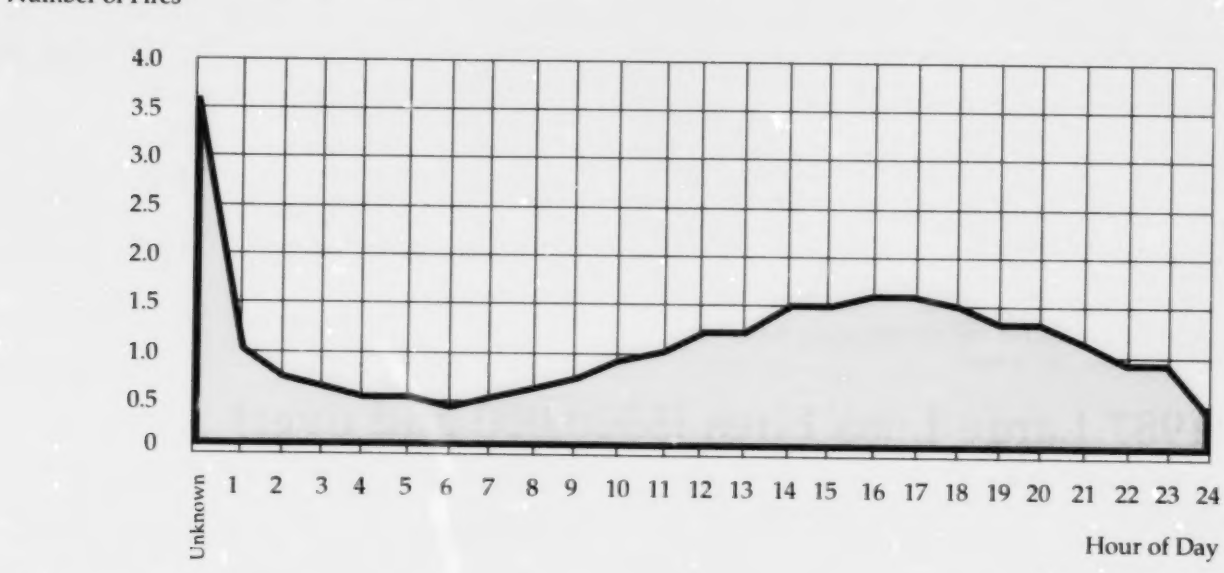


Average Fire Loss by Day of Week 1978-1987

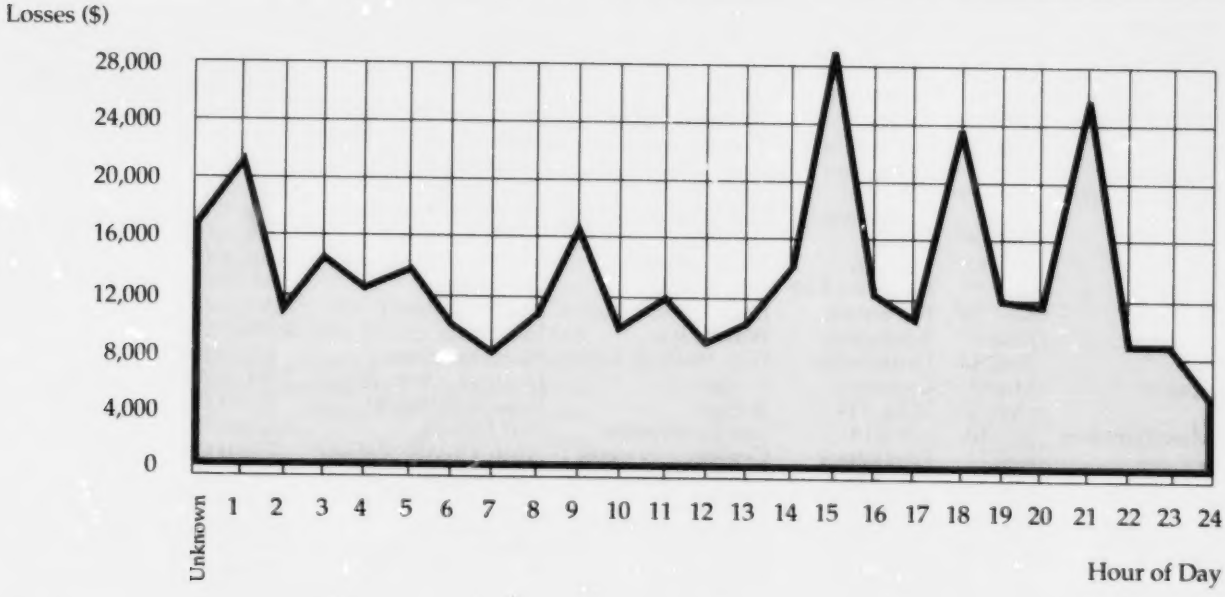


Commentary
From 1978 to 1987, the highest average number of fires on any day of the week occurred on Saturday. Sunday had higher losses than other days, with Monday having the lowest losses.

Average Number of Fires by Hour of Day 1978-1987



Average Fire Loss by Hour of Day 1978-1987



Commentary
While the greatest number of fires occurred between the hours of 1400 (2:00 p.m.) and 1800 (6:00 p.m.), the greatest losses generally occurred at 1500 (3:00 p.m.) and 2100 (9:00 p.m.).

Fires by Loss Category – 1987

Loss Category	Number	Losses	Percentage Number	Percentage Losses
$1 - 99	1,351	33,857	17.1	Less than .1
100 - 999	2,408	972,630	30.6	.6
1,000 - 9,999	2,858	8,933,955	36.3	5.7
10,000 - 49,999	902	19,940,479	11.4	12.7
50,000 - 249,999	308	29,295,393	3.9	18.7
250,000 - 499,999	18	5,996,563	.2	3.8
500,000 and over	33	91,744,291	.4	58.5
Total	**7,878**	**156,917,168**	**99.9**	**100.1**

Commentary
Just over one-half of one per cent of the fires caused 47.7% of the 1987 losses.

1987 Large Loss Fires ($500,000 and over)

Property Class	Date	Location	Occupancy	Act or Omission	Losses	Deaths	Injuries
Assembly	Feb. 27	Edmonton	Nightclub	Mech. Elect. Malfcn.	1,812,000		
Institutional	June 18	Drumheller	Prison	Incendiary	1,100,000		
Residential	Jan. 11	Calgary	Duplex	Ignorance of Hazard	568,000	—	4
	Feb. 15	Slave Lake	Hotel	Incendiary	1,502,602		
	Feb. 21	Banff	Motel	Mech. Elect. Malfcn.	1,850,000		
Business and	Jan. 21	Bonnyville	Prov. Gov't. office	Incendiary	672,728		
Personal Service	Mar. 14	Banff	Bank in a hist. bldg.	Unknown	1,200,000		
	Apr. 21	Calgary	General bus. office	Incendiary	591,123	—	1
Mercantile	Jan. 19	Calgary	Paint Store	Human Failing	686,354	—	7
	Jan. 20	Wetaskiwin	Builder's sup. store	Unknown	550,000		
	Mar. 9	Grand Centre	Mall	Mech. Elect. Malfcn.	1,566,384		
	May 14	Vermilion	Variety store	Unknown	724,782		
	May 26	Calgary	Spec. food store	Smoker's Material	859,001	—	1
	May 31	Edmonton	Motor veh. repair	Weld./Cut. Too Close	593,326		
Industrial	Mar. 6	Edmonton	Metal mfg.	Unknown	850,000		
Manufacturing	Apr. 29	M.D. #31	Slaughtering House	Unknown	1,384,000		
	May 1	Edmonton	Haz. Chemical Mfg.	Misuse of Mat. Ign.	1,200,000		
	Sept. 4	Hinton	Sawmill	Torch Too Close	538,500	—	3
	Oct. 11	I.D. #18	Petro refinery	Mech. Elect. Failure	55,000,000		
	Dec. 29	Medicine Hat	Grain mill	Unknown	500,000		
Storage	Mar. 27	Edmonton	Elect. appl. & sup.	Incendiary	1,365,000		
	June 4	Edmonton	Warehouse	Unknown	1,458,307		
	June 14	Drumheller	Hvy Mach. & Equip.	Electrical Short	627,568		
Special	May 9	Camrose	Bridge	Uncontr. Open Fire	1,000,000		
	Oct. 17	M.D. #14	Bridge	Vehicle Accident	800,000		
Miscellaneous	Jan. 10	I.D. #14	Gas distribution	Part Failure	6,000,000		
	Jan. 11	Edmonton	Cement mix plant	Auto. Control Failure	750,000		
	Jan. 26	Cty. #18	Gas manufacturing	Part Failure	630,000		
	May 5	M.D. #130	Cattle barn	Unknown	608,116		
	June 11	Fort Sask.	Gas manufacturing	Part Failure	1,000,000		
	Aug. 30	Cty. #26	Cattle barn	Mech. Elect. Malfcn.	650,000		
	Nov. 24	Cty. #29	Flam Liq tank truck	Part Failure	506,500		
	Dec. 12	I.D. #17	Gas manufacturing	Unknown	2,600,000		

Commentary
In comparison with 1986 large loss fires, 1987 large loss fires increased by 65% and the dollar losses increased by 212%.

Fires by Major Property Classifications – 1987

Property Classifcation	Number Of Fires	% Of Total	Losses	% Of Total
Assembly				
Theatre, Studio, Auditorium	2	—	1,200	—
Amusement, Recreation Place	26	.3	710,435	.5
School, College, University	51	.6	250,798	.2
Church, Funeral Parlour	14	.2	222,628	.1
Clubs, Social, Sport	4	.1	401,050	.3
Museum, Art Gallery, Library	1	—	1,200,000	.8
Food or Beverage Establishment	73	.9	2,729,008	1.7
Passenger Terminal, Station	2	—	501	—
Miscellaneous	0	—	0	—
Sub-Total	**173**	**2.2**	**5,515,620**	**3.5**
Institutional				
Prison, Jail, Reformatory	6	.1	1,100,562	.7
Home for the Aged	12	.2	7,151	—
Child Care	2	—	11	—
Hospital, Sanatorium, Clinic	36	.5	52,021	—
Miscellaneous	0	—	0	—
Sub-Total	**56**	**.7**	**1,159,745**	**.7**
Residential				
One and Two Family Dwellings	1,523	19.3	21,066,734	13.4
Apartment	491	6.2	2,994,237	1.9
Rooming, Boarding House	7	.1	8,851	—
Hotel	40	.5	1,624,807	1.0
Motor Hotel	14	.2	1,946,963	1.2
Dormitory	16	.2	215,346	.1
Mobile Home, Trailer	306	3.9	4,058,402	2.6
Miscellaneous	6	.1	8,004	—
Sub-Total	**2,403**	**30.5**	**31,923,344**	**20.3**
Business and Personal Service				
Office	54	.7	1,617,893	1.0
Personal Service	3	—	104,033	.1
Electronic Equipment	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**57**	**.7**	**1,721,926**	**1.1**
Mercantile				
Food, Beverage Sale	17	.2	1,596,859	1.0
Textile, Wearing Apparel Sale	4	.1	32,255	—
Furniture, Appliance, Hardware Sales	4	.1	852,971	.5
Books, Newspapers, Drugs, Specialties	11	.1	158,166	.1
Recreation, Hobby Supplies	4	.1	269,674	.2
Repair Shop, Laundry, Dry Cleaner	17	.2	635,446	.4
Motor Vehicles, Boats, Sales and Service	55	.7	3,009,128	1.9
Department, Variety Store	22	.3	2,517,696	1.6
Miscellaneous	3	—	556,259	.4
Sub-Total	**137**	**1.7**	**9,628,454**	**6.1**

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Fires by Major Property Classifications – 1987 (cont'd)

Property Classification	Number Of Fires	% Of Total	Losses	% Of Total
Industrial Manufacturing Properties				
Chemicals, Petroleum, Paints, Plastics	18	.2	56,317,932	35.9
Wood, Furniture, Paper, Printing	24	.3	1,579,858	1.0
Metal, Metal Products, Electrical Equipment and Appliances	45	.6	2,105,490	1.3
Food Processing	17	.2	2,339,698	1.5
Beverage, Tobacco, Soap, Margarine	1	—	2,000	—
Textiles	1	—	200	—
Wearing Apparel, Footwear	2	—	23,945	—
Vehicles and Related Equipment	0	—	0	—
Miscellaneous	2	—	1,500	—
Sub-Total	**110**	**1.4**	**62,370,623**	**39.7**
Storage Properties				
Agricultural Products	36	.5	370,197	.2
Textiles, Fibres, Clothing	0	—	0	—
Processed Food, Beverage	1	—	2,500	—
Flammable Liquids, Gases, Petroleum Products	22	.3	391,764	.2
Wood, Furniture, Paper and Products	50	.6	1,551,914	1.0
Chemicals, Plastics, Paints	4	.1	9,100	—
Metal Products, Machinery, Electrical Appliance	7	.1	1,380,520	.9
Vehicle	237	3.0	2,977,138	1.9
Miscellaneous	24	.3	2,969,028	1.9
Sub-Total	**381**	**4.8**	**9,652,161**	**6.2**
Special Property — Transportation Equipment				
Outdoor Property	1,123	14.3	273,413	.2
Special Connecting Thoroughfares	2	—	800,030	.5
Under Construction or Demolition: Vacant	147	1.9	1,941,262	1.2
Watercraft	16	.2	60,506	—
Rail Transport Vehicle and Equipment	10	.1	197,000	.1
Ground Transport Vehicle	2,303	29.2	8,267,473	5.3
Aircraft	7	.1	73,310	—
Special Vehicles	287	3.6	4,018,361	2.6
Other Special Property	0	—	0	—
Sub-Total	**3,895**	**49.4**	**15,631,355**	**10.0**
Miscellaneous Property				
Laboratories	5	.1	28,830	—
Farm Facilities	319	4.0	5,442,678	3.5
Miscellaneous Outbuildings	209	2.7	857,464	.5
Utility	77	1.0	6,354,129	4.0
Cement, Glass, Pottery Manufacturing	4	.1	844,000	.5
Mining, Quarrying	23	.3	5,754,378	3.7
Communications	0	—	0	—
Nucleonics	0	—	0	—
Miscellaneous	29	.4	32,461	—
Sub-Total	**666**	**8.5**	**19,313,940**	**12.3**
Total	**7,878**	**99.9**	**156,917,168**	**99.9**

Commentary

While the number of fires was greatest in the 'special' classification (notably vehicles) with 49%, losses were greatest in industrial manufacturing properties with 40%.

Property Losses Related to Area of Origin – 1987

Property Classification	Means of Egress Number Of Fires	Means of Egress Losses	Assembly Area Number Of Fires	Assembly Area Losses	Function Area Number Of Fires	Function Area Losses	Storage Area Number Of Fires	Storage Area Losses
Assembly	16	129,352	13	180,133	63	838,406	10	160,027
Institutional	3	816	5	1,025	36	1,137,164	3	1,601
Residential	65	860,945	271	3,764,051	1,296	13,586,607	77	1,038,248
Business	10	6,131	2	2,500	18	1,410,370	5	41,373
Mercantile	4	52,574	11	1,550,816	23	460,690	12	1,122,720
Manufacturing	1	85,000	0	0	24	57,399,803	22	1,782,036
Storage	0	0	3	243,110	6	703,168	136	4,849,900
Special	2	123,000	7	244,254	24	377,027	11	55,878
Miscellaneous	1	200	0	0	42	2,204,432	112	2,117,217
Total	**102**	**1,258,018**	**312**	**5,985,889**	**1,532**	**78,117,667**	**388**	**11,169,000**

Property Classification	Service Facilities Number Of Fires	Service Facilities Losses	Service and Equipment Area Number Of Fires	Service and Equipment Area Losses	Structural Area Number Of Fires	Structural Area Losses	Vehicle Area Number Of Fires	Vehicle Area Losses
Assembly	5	133,282	13	64,757	46	3,607,502	0	0
Institutional	2	3,778	3	11,850	3	3,510	0	0
Residential	57	265,756	96	2,201,423	358	4,273,956	27	187,850
Business	1	5,413	8	116,203	10	134,836	1	3,000
Mercantile	4	38,200	39	3,000,059	30	1,961,233	4	594,130
Manufacturing	4	557,700	22	624,054	23	263,555	1	68,849
Storage	2	245,050	12	288,638	127	1,426,093	16	400,032
Special	1	1	6	578,080	59	576,657	2,621	12,071,567
Miscellaneous	6	8,675,650	20	1,342,140	227	2,809,007	24	27,508
Total	**82**	**9,924,830**	**219**	**8,227,249**	**883**	**15,056,349**	**2,694**	**13,352,936**

Property Classification	Outside Area Number Of Fires	Outside Area Losses	Unknown Number Of Fires	Unknown Losses	Total Number Of Fires	Total Losses
Assembly	3	1,051	4	401,110	173	5,515,620
Institutional	0	0	1	1	56	1,159,745
Residential	51	1,060,435	105	4,684,073	2,403	31,923,344
Business	2	2,100	0	0	57	1,721,926
Mercantile	6	80,000	4	768,032	137	9,628,454
Manufacturing	9	44,550	4	1,545,076	110	62,370,623
Storage	71	1,401,750	8	94,375	381	9,652,161
Special	1,126	1,128,772	38	476,119	3,895	15,631,355
Miscellaneous	193	993,594	41	1,144,192	666	19,313,940
Total	**1,461**	**4,712,252**	**205**	**9,112,978**	**7,878**	**156,917,168**

Commentary

For all types of occupancies, fires starting in service facilities caused an average $121,034 loss. The next highest average loss, $50,990, occurred when fires started in function areas.

Property Losses Related to Act or Omission – 1987

Property Classification	Incendiary Fires		Misuse Of Source		Misuse Of Material		Mechanical, Electrical Failure	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	53	809,371	24	338,018	31	329,421	34	2,640,607
Institutional	9	1,120,155	14	16,721	3	52	5	1,910
Residential	201	4,708,229	472	4,494,359	526	4,095,257	407	6,650,424
Business	18	1,302,025	11	94,138	1	6,389	15	266,436
Mercantile	25	449,435	24	2,319,874	14	549,538	36	2,656,963
Manufacturing	4	492,300	38	1,864,363	7	1,331,778	25	55,330,148
Storage	80	2,114,215	101	2,020,839	29	229,988	55	1,589,246
Special	509	2,011,090	703	843,507	92	556,806	1,577	5,538,450
Miscellaneous	82	173,100	224	1,047,753	25	374,172	109	11,277,674
Total	**981**	**13,179,920**	**1,611**	**13,039,617**	**728**	**7,473,401**	**2,263**	**85,951,858**

Property Classification	Design Deficiency		Misuse Of Equipment		Human Failing		Vehicle Accident	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	3	6,714	1	50,000	16	114,430	0	0
Institutional	3	3,501	0	0	20	17,005	0	0
Residential	84	1,488,127	5	88,125	457	3,773,730	0	0
Business	3	2,693	0	0	3	2,900	0	0
Mercantile	2	24,000	1	1	11	858,437	1	200
Manufacturing	2	50,200	1	100	11	158,540	0	0
Storage	12	153,431	1	1,000	16	113,973	0	0
Special	9	28,797	13	59,625	116	376,157	106	2,017,508
Miscellaneous	7	87,000	0	0	17	31,909	1	1,500
Total	**125**	**1,844,463**	**22**	**198,851**	**667**	**5,447,081**	**108**	**2,019,208**

Property Classification	Miscellaneous		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	5	4,655	6	1,222,404	173	5,515,620
Institutional	1	400	1	1	56	1,159,745
Residential	42	357,631	209	6,267,462	2,403	31,932,344
Business	1	2,500	5	44,800	57	1,721,926
Mercantile	4	40,873	19	2,729,133	137	9,628,454
Manufacturing	2	7,500	20	3,135,694	110	62,370,623
Storage	17	451,086	70	2,978,383	381	9,652,161
Special	103	843,679	667	3,355,736	3,895	15,631,355
Miscellaneous	35	288,912	166	6,031,920	666	19,313,940
Total	**210**	**1,997,236**	**1,163**	**25,765,533**	**7,878**	**156,917,168**

Commentary
Mechanical and electrical failures caused 29% of all fires and 55% of the losses. Misuse of source of ignition caused 20% of all fires and 8% of all property losses. The average loss in an incendiary fire was $13,435.

Property Losses Related to Source of Ignition – 1987

Property Classification	Cooking Equipment		Heating Equipment		Appliances and Equipment		Electrical Distribution Equipment	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	48	394,743	15	2,391,897	2	7,512	13	129,531
Institutional	7	4,484	0	0	2	1,201	4	10,010
Residential	757	4,556,575	268	4,186,862	173	1,315,100	135	3,886,766
Business	3	12,700	3	20,300	3	3,200	6	206,394
Mercantile	3	18,001	18	825,855	11	1,067,986	15	155,168
Manufacturing	3	1,101	14	196,801	3	103,000	5	66,900
Storage	4	36,802	35	255,867	3	217,910	30	635,134
Special	59	26,576	24	630,691	24	270,322	767	2,474,015
Miscellaneous	2	3,200	31	1,353,370	2	654,000	55	948,216
Total	**886**	**5,054,182**	**408**	**9,861,643**	**223**	**3,640,231**	**1,030**	**8,512,134**

Property Classification	Other Electrical Equipment		Smoker's Material and "Open" Flames		Exposure		Miscellaneous	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	6	24,700	65	452,393	11	119,764	1	2,500
Institutional	1	50	37	1,137,099	0	0	3	3,900
Residential	50	352,604	628	8,522,129	125	851,758	41	469,755
Business	4	5,250	27	1,364,674	3	24,492	3	9,782
Mercantile	10	92,136	46	2,828,245	9	159,203	6	242,519
Manufacturing	5	103,837	32	1,618,011	13	500,453	18	56,823,678
Storage	9	726,122	88	2,055,958	125	2,131,763	20	330,027
Special	19	57,482	1,014	2,002,209	349	1,403,560	605	3,309,051
Miscellaneous	26	7,156,640	95	502,643	288	1,464,822	36	1,395,611
Total	**130**	**8,518,821**	**2,032**	**20,483,361**	**923**	**6,655,815**	**733**	**65,586,823**

Property Classification	Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	12	1,992,580	173	5,515,620
Institutional	2	3,001	56	1,159,745
Residential	226	7,781,795	2,403	31,923,344
Business	5	75,134	57	1,721,926
Mercantile	19	4,239,341	137	9,628,454
Manufacturing	17	2,956,842	110	62,370,623
Storage	67	3,262,578	381	9,652,161
Special	1,034	5,457,449	3,895	15,631,355
Miscellaneous	131	5,835,438	666	19,313,940
Total	**1,513**	**31,604,158**	**7,878**	**156,917,168**

Commentary

Smoker's material and open flames were the source of ignition for 26% of the fires and 13% of the losses. Where a source of ignition was identified, the highest average loss of $65,529 was in fires where the source was electrical equipment. In residential properties the highest average loss, $28,790 was in fires where the source of ignition was electrical distribution equipment.

Property Losses Related to Fuel or Energy – 1987

Property Classification	Coal or Wood, etc. Number Of Fires	Losses	Fuel Oil Number Of Fires	Losses	Gasoline Number Of Fires	Losses	Natural Gas or Other Fuel Gas Number Of Fires	Losses
Assembly	3	4,500	0	0	0	0	49	2,760,962
Institutional	0	0	0	0	0	0	6	6,730
Residential	176	2,043,273	21	306,013	5	45,137	213	3,619,301
Business	0	0	0	0	1	50	5	11,593
Mercantile	4	240,844	0	0	2	78,600	26	2,140,285
Manufacturing	7	146,105	1	15,000	0	0	26	1,124,788
Storage	19	97,817	6	258,600	3	7,608	28	342,395
Special	34	71,364	66	1,726,261	449	1,493,390	130	546,307
Miscellaneous	12	94,004	7	442,000	13	29,585	17	8,732,688
Total	**255**	**2,697,907**	**101**	**2,747,874**	**473**	**1,654,370**	**500**	**19,285,049**

Property Classification	Smoker's Material Number Of Fires	Losses	Electricity Number Of Fires	Losses	Lightning Number Of Fires	Losses	Exposure Number Of Fires	Losses
Assembly	58	397,226	37	227,570	0	0	11	119,764
Institutional	34	1,131,371	12	15,743	0	0	0	0
Residential	533	6,972,616	999	9,002,184	15	103,554	127	872,136
Business	23	1,358,911	17	242,657	0	0	3	24,492
Mercantile	31	1,495,787	38	1,349,003	0	0	9	159,203
Manufacturing	5	126,305	22	647,638	1	5,500	13	500,453
Storage	69	1,666,209	49	1,650,780	6	231,019	124	2,131,563
Special	924	1,505,091	812	2,758,741	4	3,506	347	1,383,884
Miscellaneous	84	182,637	90	2,155,586	9	85,392	287	1,464,522
Total	**1,761**	**14,836,153**	**2,076**	**18,049,902**	**35**	**428,971**	**921**	**6,656,017**

Property Classification	Unclassified Number Of Fires	Losses	Unknown Number Of Fires	Losses	Total Number Of Fires	Losses
Assembly	3	10,893	12	1,994,705	173	5,515,620
Institutional	1	400	3	5,501	56	1,159,745
Residential	101	1,169,944	213	7,789,186	2,403	31,923,344
Business	3	9,089	5	75,134	57	1,721,926
Mercantile	12	92,078	15	4,072,654	137	9,628,454
Manufacturing	18	56,853,491	17	2,951,343	110	62,370,623
Storage	16	248,881	61	3,017,289	381	9,652,161
Special	108	846,012	1,021	5,296,799	3,895	15,631,355
Miscellaneous	23	223,576	124	5,903,950	666	19,313,940
Total	**285**	**59,454,364**	**1,471**	**31,106,561**	**7,878**	**156,917,168**

Commentary

Electricity was the most commonly identified fuel or energy resulting in 26% of the fires. The average loss in a fire initially fueled by natural gas or other fuel gases is $38,570.

Property Losses Related to Material First Ignited – 1987

Property Classification	Structural Components		Furniture, Furnishings		Clothing, Textiles		Wood, Paper Products	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	24	1,584,478	4	154,890	4	24,135	26	69,149
Institutional	2	3,500	16	1,120,749	8	7,590	7	570
Residential	303	3,281,282	367	3,817,120	128	1,429,201	155	1,700,361
Business	10	37,835	2	2,510	3	1,100	9	678,067
Mercantile	16	1,860,138	2	279,167	5	885,664	16	426,279
Manufacturing	22	353,455	3	70,349	2	21,000	14	473,564
Storage	114	1,357,830	8	123,770	5	5,441	65	1,564,000
Special	58	409,851	89	172,683	41	229,829	191	1,629,333
Miscellaneous	218	3,253,639	6	5,374	5	2,216	64	425,998
Total	**767**	**12,142,008**	**497**	**5,746,612**	**201**	**2,606,176**	**547**	**6,967,321**

Property Classification	Flammable & Combustible Liquids		Flammable Gases		Chemicals		Agricultural Products	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	41	150,305	7	2,222,145	4	37,626	4	726
Institutional	1	1	1	50	4	625	3	2,101
Residential	651	6,399,930	67	1,718,569	57	454,274	45	127,193
Business	4	633,157	1	300	5	13,300	1	5,413
Mercantile	31	2,318,866	5	581,932	7	28,066	3	23,600
Manufacturing	19	298,243	5	58,397	7	2,000,201	11	850,797
Storage	55	876,253	8	289,500	4	17,487	17	1,057,661
Special	960	4,544,164	85	165,313	52	145,487	342	1,004,332
Miscellaneous	30	9,271,022	12	1,910,602	4	40,550	160	1,562,081
Total	**1,792**	**24,491,941**	**191**	**6,946,808**	**144**	**2,737,663**	**586**	**4,633,904**

Property Classification	Miscellaneous		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	47	347,934	12	924,232	173	5,515,620
Institutional	12	20,701	2	3,858	56	1,159,745
Residential	382	3,134,883	248	9,860,531	2,403	31,923,344
Business	20	314,794	2	35,450	57	1,721,926
Mercantile	32	457,742	20	2,767,000	137	9,628,454
Manufacturing	10	156,824	17	58,087,793	110	62,370,623
Storage	52	1,167,813	53	3,192,406	381	9,652,161
Special	1,286	2,370,597	791	4,959,719	3,895	15,631,355
Miscellaneous	65	678,621	102	2,163,837	666	19,313,940
Total	**1,906**	**8,649,909**	**1,247**	**81,994,826**	**7,878**	**156,917,168**

Commentary
When identified, the materials most commonly first ignited were flammable and combustible liquids (23%). These fires resulted in 16% of the losses.

Property Losses Related to Initial Detection – 1987

Property Classification	Smoke Alarm/ Detector Device		Heat Alarm/ Detector Device		Automatic Systems		Visual Sighting	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	7	66,556	6	112,091	4	29,571	154	5,307,400
Institutional	19	19,015	3	5,915	0	0	34	1,134,815
Residential	227	1,566,711	5	3,915	14	65,283	2,156	30,285,935
Business	3	55,200	2	110,000	2	10,001	50	1,546,725
Mercantile	0	0	0	0	5	24,274	132	9,604,180
Manufacturing	0	0	0	0	5	4,500	105	62,366,123
Storage	2	1,300	0	0	1	5,133	378	9,645,728
Special	1	500	0	0	1	574	3,890	15,618,115
Miscellaneous	1	700	1	50,000	1	600	662	13,262,640
Total	**260**	**1,709,982**	**17**	**281,921**	**33**	**139,936**	**7,561**	**148,771,661**

Property Classification	Unclassified or Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	2	2	173	5,515,620
Institutional	0	0	56	1,159,745
Residential	1	1,500	2,403	31,923,344
Business	0	0	57	1,721,926
Mercantile	0	0	137	9,628,454
Manufacturing	0	0	110	62,370,623
Storage	0	0	381	9,652,161
Special	3	12,166	3,895	15,631,355
Miscellaneous	1	6,000,000	666	19,313,940
Total	**7**	**6,013,668**	**7,878**	**156,917,168**

Commentary

The average loss of a fire first detected by visual sighting was $19,676. The average loss of a fire first detected by a smoke alarm/detector was $6,577 and where the fire was detected by an automatic system, mainly sprinklers, the average loss was $4,240.

Fires by Method of Fire Control and Extinguishment – 1987

Method of Fire Control and Extinguishment	Number Of Fires	% Of Total	Losses	% Of Total
Hand Fire Extinguisher				
Water pump tank	271	3.4	1,590,657	1.0
Water pressurized	99	1.3	1,057,032	.7
Water soda-acid	1	—	1,000	—
Foam	17	.2	518,808	.3
Vapourizing liquid/Halon	5	.1	12,204	—
CO_2	30	.4	166,897	.1
Dry chemical	398	5.1	7,887,884	5.0
Multi-purpose dry chemical	58	.7	1,191,978	.8
Hand fire extinguisher - unclassified	57	.7	67,148	—
Sub-Total	**936**	**11.9**	**12,493,608**	**8.0**
Standpipe System				
Small hose, 38 mm nominal size, straight stream nozzle	37	.5	155,847	.1
Small hose, 38 mm nominal size, combination nozzle	204	2.6	1,619,037	1.0
Large hose, 65 mm nominal size, straight stream nozzle	2	—	7,734	—
Large hose, 65 mm nominal size, combination nozzle	6	.1	148,464	.1
Continuous flow hose, less than 38 mm nominal size, straight stream nozzle	1	—	1,000	—
Continuous flow hose, less than 38 mm nominal size, combination nozzle	1	—	500	—
Standpipe system - unclassified	3	—	3,126	—
Sub-Total	**254**	**3.2**	**1,935,708**	**1.2**
"Makeshift" Fire Fighting Aid				
Garden hose	158	2.0	173,300	.1
Water bucket	73	.9	82,853	.1
Small water container	131	1.7	167,532	.1
Sand bucket	3	—	350	—
Dry chemical and scoop	1	—	100	—
Baking soda	25	.3	61,002	—
Smothering by covering	73	.9	113,789	.1
Snow	27	.3	36,922	—
"Makeshift"fire fighting aid - unclassified	49	.6	72,279	—
Sub-Total	**540**	**6.9**	**708,127**	**.5**
Fire Department – Water				
Booster hose, 25 mm or less	253	3.2	419,847	.3
38 mm hose, 1 hoseline	1,616	20.5	6,557,842	4.2
38 mm hose, 2 or more hoselines	811	10.3	15,604,090	9.9
65 mm hose, 1 hoseline	24	.3	205,049	.1
65 mm hose, 2 or more hoselines	43	.5	1,621,622	1.0
77 mm or larger hose, 1 or more hoselines	8	.1	1,212,447	.8
Combinations of 38 mm, 65 mm, 77 mm or larger hoselines	363	4.6	28,656,647	18.3
Portable water deluge set	4	.1	25,466	—
Fire department - water - unclassified	59	.7	344,055	.2
Sub-Total	**3,181**	**40.4**	**54,647,065**	**34.8**

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Fires by Method of Fire Control and Extinguishment – 1987 (cont'd)

Method of Fire Control and Extinguishment	Number Of Fires	% Of Total	Losses	% Of Total
Fire Department - Other Than Water				
Crash-fire foam vehicle, using monitor	1	—	40,000	—
Crash-fire foam vehicle, using handlines	2	—	101	—
Pumper, foam handlines only, via educator	19	.2	1,116,142	.7
Vehicle, combination, foam-dry chemical	5	.1	47,068	—
Vehicle, dry chemical, under 450 kg	3	—	5,955	—
Vehicle, dry chemical, 450 kg and over	0	—	0	—
Fire department - other than water - unclassified	17	.2	16,674	—
Sub-Total	**47**	**.6**	**1,225,940**	**.8**
Sprinkler System				
Wet pipe system, central station supervised, standard watchman service, or alarm connection to fire department	12	.2	55,115	—
Wet pipe system, local alarm only	12	.2	142,247	.1
Dry pipe system, central station supervised, standard watchman service, or alarm connection to fire department	2	—	9,950	—
Dry pipe system, local alarm only	1	—	1,386	—
Pre-action system, central station supervised, standard watchman service, or alarm connection to fire department	0	—	0	—
Pre-action system, local alarm only	0	—	0	—
Engineered systems	0	—	0	—
Sprinkler system - unclassified	2	—	551	—
Sub-Total	**29**	**.4**	**209,249**	**.1**
Fixed System Other Than Sprinklers				
Carbon dioxide system	1	—	100	—
Dry chemical system	4	.1	8,953	—
Halon system	0	—	0	—
Conventional (Protein) foam system	0	—	0	—
High expansion foam system	0	—	0	—
Foam-water system	1	—	50,000	—
Water spray system	0	—	0	—
Fixed system other than sprinklers - unclassified	1	—	500	—
Sub-Total	**7**	**.1**	**59,553**	**—**
Burned Out				
Completely burned out before arrival of fire department	166	2.1	1,213,518	.8
Incapable of control by fire department on arrival	20	.3	1,764,891	1.1
Burned out - unclassified	151	1.9	410,490	.3
Sub-Total	**337**	**4.3**	**3,388,899**	**2.2**
Miscellaneous				
Portable high expansion foam generator	0	—	0	—
CO_2 handhose system, 25 kg or more	0	—	0	—
Dry chemical system, handhose system, 25 kg or more	0	—	0	—
Miscellaneous - unclassified	71	.9	629,455	.4
Miscellaneous - cannot be determined	2,476	31.4	81,619,564	52.0
Sub-Total	**2,547**	**32.3**	**82,249,019**	**52.4**
Total	**7,878**	**100.1**	**156,917,168**	**100.0**

Commentary:
Where identified, 12% of all fires were extinguished by a hand fire extinguisher. Another 7% were extinguished by makeshift firefighting aids.

Home Fire Losses in Alberta – 1987

Type	Incidents	Deaths	Injuries	$ Loss
1 & 2 Family Dwellings	1,523	18	126	21,066,734
Mobile Home	179	6	22	3,393,893
Apartment, Tenement	491	13	58	2,994,237
Total	**2,193**	**37**	**206**	**27,454,864**

Home Fires by Major Areas of Fire Origin – 1987

Area of Origin	% Of Incidents	% Of Deaths	% Of Injuries	% Of $ Loss
Kitchen	35	19	32	19
Structural Area	14	3	3	15
Living Room	12	46	24	14
Bedroom	12	8	18	12
Laundry Area	5	0	3	2
Heating Equipment Room	4	3	10	7
Chimney	2	0	0	1
Other	16	21	10	30

Home Fires by Major Sources of Ignition – 1987

Area of Origin	Source of Ignition	Percent Of All Fires In Area Of Origin Incidents	Deaths	Injuries	$ Loss
Kitchen	Stove or range, top burner area	71	43	88	68
Structural Area	Exposure fires	25	—	—	17
	Electrical: wiring; distribution	18	—	20	21
	Fireplace	12	—	—	14
Living Room	Smoker's material*	36	24	51	34
	Match, lighter not used in smoking	14	35	18	12
	Fireplace	13	—	—	4
Bedroom	Match, lighter not used in smoking	32	—	22	31
	Smoker's material*	27	67	41	22
	Candle	8	—	11	10
	Incandescent lamp, Light bulb	7	—	3	2
Laundry Area	Clothes dryer	61	—	29	25
Heating Equip. Area	Central heating unit	46	100	38	42
	Service water heater	27	—	19	24
Chimney	Fireplace	71	—	—	19
	Match, lighter not used in smoking	22	62	10	8
	Smoker's material*	10	—	14	5

* Smoker's material includes cigarettes, pipe, cigar and/or matches, lighter used in conjunction with smoking.

Home Fires by Major Ignition Scenarios – 1987

Area and Source of Ignition	Material First Ignited	Act or Omission	Percent Of All Fires In Area Of Origin – Source Of Ignition Incidents	Deaths	Injuries	$ Loss
Kitchen:						
Stove or range top burner area						
Fire in pan	Cooking oil	Overheated oil	14*	33	9	10
Fire in deep-fat fryer/pot	Cooking oil	Overheated oil	52	33	57	58
Structural Areas:						
Exposure fire from detached structure	Mainly exterior wall cover	Several	55	—	—	52
Electrical: wiring; distribution equip.	Insulation	Electrical Short Circuit	52	—	100	49
Fireplace	Wall structure	Installation deficiency	50	—	—	63
Match, lighter not used with smoking	Several	Arson	50	—	—	35
		Children playing	40	—	100	30
Living Room:						
Smoker's material	Upholstered furniture	Smoker's material**	72	75	64	71
Match, lighter not used with smoking	Carpet, rug, furnishings, paper products, clothing	Children playing	54	83	44	49
Fireplace	Carpet, rug	Human failing	47	—	—	12
Bedroom:						
Match, lighter not used with smoking	Carpet, rug, furnishings, paper products	Children playing	71	—	75	58
	clothing	Arson	20	—	14	31
Smoker's material	Mattress, bedding	Smoker's material	58	50	60	47
		Asleep	6	—	—	1
		Impaired	10	—	13	3
Laundry Area:						
Clothes dryer	Fibres, lint, clothing textiles, fabrics, etc.	Ignorance of hazard	23	—	—	18
		Mechanical, electrical failure, malfunction	18	—	50	29
Heating Equipment Room:						
Central heating unit	Ceiling/covering, fuel oil, natural gas, propane, fibres, electrical/insulation	Mechanical, electrical failure, malfunction	31	—	38	21
	Clothing, paper, propane, oily rags	Ignorance of hazard	10	—	13	4
Service water heater	Clothing, cardboard, gasoline, flammable liquid, propane	Fuel: spilled; used for cleaning; too close to heat; improper storage; ignorance of hazard	48	—	50	53

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Home Fires by Major Ignition Scenarios – 1987 (cont'd)

Area and Source of Origin	Material First Ignited	Act or Omission	Percent Of All Fires In Area Of Origin – Source Of Ignition Incidents	Deaths	Injuries	$ Loss
Chimney:						
Fireplace	Floor	Ignorance of hazard	2	—	—	16
	Flam/liquid	Ignorance of hazard	2	—	—	—
	Creosote	Ignorance of hazard, misuse, overfuelling	67	—	—	3
Other:						
Match, lighter not used with smoking	Carpet, rug, furniture, clothing, wood, paper, gasoline, fibres, trash	Children playing	33	20	50	43
Smoker's material	Furniture, mattress, bedding, clothing, wood, paper, trash	Smoker's material	83	—	33	55

* Interpreted as follows: 14 percent of all fires in the kitchen – stove or range top burner area were from the ignition of cooking oil in pans, as a result of overheating.

** Misuse of smoker's material.

Home Fires by Smoke Alarm Operation – 1987

Smoke Alarm Operation	No. Of Fires	% Of Total	No. Of Deaths	% Of Total	No. Of Injuries	% Of Total	Dollar Losses	% Of Total
a) Smoke alarm installation:								
– not installed	1,179	53.8	16	41.0	88	42.7	14,987,633	54.6
– installed	1,014	46.2	21	59.0	118	57.3	12,467,231	45.4
Total	2,193	100.0	37	100.0	206	100.0	27,454,864	100.0
b) Activation of installed alarms:								
– activated	492	48.5	8	43.5	60	50.8	5,442,255	43.7
– not activated	371	36.6	2	8.7	40	33.9	2,401,399	19.3
– unknown	151	14.9	11	47.8	18	15.3	4,623,577	37.1
Total	1,014	100.0	21	100.0	118	100.0	12,467,231	100.0
c) Alarm activation vs occupants' action/condition:								
– evacuated	283	57.5	7	90.0	40	66.7	3,390,539	62.3
– unnecessary to evacuate	121	24.6	—	—	9	15.0	586,445	10.8
– under the influence of alcohol/drugs	4	0.8	—	—	1	1.7	18,410	0.3
– unable to respond	3	0.6	—	—	2	3.3	3,990	0.1
– alarm inaudible	1	0.2	—	—	1	1.7	3,000	0.1
– unknown	12	2.4	—	—	—	—	155,775	2.9
– other	68	13.8	1	10.0	7	11.7	1,284,096	23.6
Total	492	99.9	8	100.0	60	100.0	5,442,255	100.1
d) Alarms not activated – reasons:								
– Battery missing	79	21.3	2	100.0	17	42.5	726,007	30.2
– Battery dead	29	7.8	—	—	2	5.0	350,847	14.6
– Electricity off	17	4.6	—	—	—	—	61,774	2.6
– Electricity not connected	13	3.5	—	—	—	—	51,253	2.1
– Mechanical failure	4	1.1	—	—	—	—	6,951	0.3
– Not enough smoke	155	41.8	—	—	15	37.5	443,656	18.5
– Unsuitable location	9	2.4	—	—	—	—	95,120	4.0
– Unknown	32	9.2	—	—	5	12.5	442,742	18.4
– Other	31	8.4	—	—	1	2.5	222,548	9.3
Total	371	100.1	2	100.0	40	100.0	2,401,399	100.0

Commentary:

Smoke alarms were not installed in 54% of the homes that had fires in 1987. Alarms did not activate in 37% of the fires in homes with smoke alarms. No power source and inadequate smoke were the two primary reasons for lack of alarm activation. Occupants were alerted in 82% of the home fires where smoke alarms activated.

Municipal Fire Loss

for the Year Ending December 31, 1987

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 1									
Cnty of Grande Prairie	12,042	80	1,155,883	6.6	95.98	1,137	12,118,175	9.4	100.63
Beaverlodge	1,808	1	500	.5	.27	51	690,534	2.8	38.19
Hythe	688	4	176,500	5.8	256.54	21	451,654	3.0	65.64
Sexsmith	1,256	—	—	—	—	50	673,671	3.9	53.63
Wembley	1,227	1	200	.8	.16	32	324,529	2.6	26.44
Total	**17,021**	**86**	**1,333,083**	**5.0**	**78.31**	**1,291**	**14,258,563**	**7.5**	**83.77**
County 2									
Cnty of Vulcan	3,656	17	248,897	4.6	68.07	168	2,897,404	4.5	79.25
Vulcan	1,420	1	100	.7	.07	34	473,839	2.3	33.36
Arrowwood	140	—	—	—	—	2	82,798	1.4	59.14
Carmangay	258	—	—	—	—	7	40,603	2.7	15.73
Champion	358	4	8,345	11.1	23.31	11	57,849	3.0	16,15
Lomond	177	2	70,570	11.2	398.70	6	94,236	3.3	53.24
Milo	119	1	463	8.4	3.89	4	5,283	3.3	4.43
Total	**6,128**	**25**	**328,375**	**4.0**	**53.58**	**232**	**3,652,012**	**3.7**	**59.59**
County 3									
Cnty of Ponoka	7,739	51	777,339	6.5	100.44	480	4,054,387	6.2	52.38
Ponoka	5,473	9	77,219	1.6	14.10	139	2,748,118	2.5	50.21
Rimbey	1,748	6	15,383	3.4	8.80	72	363,946	4.1	20.82
Parkland Beach	48	—	—	—	—	—	—	—	—
Total	**15,008**	**66**	**869,941**	**4.3**	**57.96**	**691**	**7,166,451**	**4.6**	**47.75**
County 4									
Cnty of Newell	6,143	26	494,369	4.2	80.47	372	47,282,748	6.0	769.70
Brooks	9,464	15	748,146	1.5	79.05	220	3,966,616	2.3	41.91
Bassano	1,186	3	2,541	2.5	2.14	34	164,580	2.8	13.87
Duchess	430	2	4,715	4.6	10.96	8	93,621	1.8	21.77
Rosemary	321	—	—	—	—	4	7,405	1.2	2.30
Tilley	362	—	—	—	—	8	255,932	2.2	70.69
Total	**17,906**	**46**	**1,249,771**	**2.5**	**69.79**	**646**	**51,770,902**	**3.6**	**289.12**
County 5									
Cnty of Warner	3,579	23	336,075	6.4	93.90	165	1,779,801	4.6	49.72
Warner	490	—	—	—	—	16	207,061	3.2	42.25
Milk River	861	1	455	1.1	.52	25	271,536	2.9	31.53
Raymond	2,957	8	83,394	2.7	28.20	69	578,938	2.3	19.57
Coutts	359	4	16,201	11.1	45.12	17	669,606	4.7	186.51
Stirling	796	2	1,535	2.5	1.92	19	121,530	2.3	15.26
Total	**9,042**	**38**	**437,660**	**4.2**	**48.40**	**311**	**3,628,472**	**3.4**	**40.12**

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Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Popu-lation	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 6									
Cnty of Stettler	5,179	32	176,586	6.1	34.09	338	4,001,732	6.5	77.26
Stettler	5,147	12	52,702	2.3	10.23	180	6,324,904	3.4	122.88
Big Valley	295	1	6,000	3.3	20.33	12	61,677	4.0	20.90
Botha	180	—	—	—	—	6	27,274	3.3	15.15
Donalda	237	1	1,000	4.2	4.21	9	116,911	3.7	49.32
Gadsby	35	—	—	—	—	2	45,001	5.7	128.57
Rochon Sands	33	1	11,500	30.3	348.48	3	23,576	9.0	71.44
White Sands	2	—	—	—	—	—	—	—	—
Total	**11,108**	**47**	**247,788**	**4.2**	**22.30**	**550**	**10,601,075**	**4.9**	**95.43**
County 7									
Cnty of Thorhild	3,094	12	633,927	3.8	204.88	155	2,748,134	5.0	88.82
Thorhild	481	—	—	—	—	12	37,626	2.4	7.82
Radway	162	1	1,100	6.1	6.79	3	5,930	1.8	3.66
Total	**3,737**	**13**	**635,027**	**3.4**	**169.92**	**170**	**2,791,690**	**4.5**	**74.70**
County 8									
Cnty of Forty Mile	3,335	6	165,658	1.7	49.67	173	2,093,445	5.1	62.77
Foremost	595	1	4,388	1.6	7.37	25	231,872	4.2	38.97
Bow Island	1,566	5	4,063	3.1	2.59	47	595,657	3.0	38.03
Burdett	278	—	—	—	—	5	178,450	1.7	64.19
Total	**5,774**	**12**	**174,109**	**2.0**	**30.15**	**250**	**3,099,424**	**4.3**	**53.67**
County 9									
Cnty of Beaver	5,400	30	215,278	5.5	39.86	320	2,541,601	5.9	47.06
Ryley	500	5	8,553	10.0	17.10	14	42,406	2.8	8.48
Tofield	1,483	5	30,100	3.3	20.29	39	368,360	2.6	24.83
Viking	1,160	—	—	—	—	30	1,612,942	2.5	139.04
Holden	411	1	7,500	2.4	18.24	5	10,976	1.2	2.67
Total	**8,954**	**41**	**261,431**	**4.5**	**29.19**	**408**	**4,576,285**	**4.5**	**51.10**
County 10									
Cnty of Wetaskiwin	9,521	75	587,463	7.8	61.70	496	5,074,774	5.2	53.30
Crystal Springs	26	—	—	—	—	2	21,677	7.6	83.37
Ma-Me-O Beach	85	—	—	—	—	21	680,407	24.7	800.47
Millet	1,540	6	8,799	3.8	5.71	29	138,758	1.8	9.01
Silver Beach	25	—	—	—	—	—	—	—	—
Grandview	55	—	—	—	—	1	332	1.8	.60
Argentia Beach	3	—	—	—	—	3	348,079	100.0	11,602.63
Poplar Bay	43	—	—	—	—	2	23,200	4.6	53.95
Total	**11,298**	**81**	**596,262**	**7.1**	**52.77**	**554**	**6,287,227**	**4.9**	**55.64**
County 11									
Cnty of Barrhead	5,728	25	651,166	4.3	113.68	210	9,576,774	3.6	167.19
Barrhead	3,991	8	50,378	2.0	12.62	82	791,541	2.0	19.83
Total	**9,719**	**33**	**701,544**	**3.3**	**72.18**	**292**	**10,368,315**	**3.0**	**106.68**

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Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 12									
Cnty of Athabasca	5,979	44	546,202	7.3	91.35	290	3,112,595	4.8	52.05
Athabasca	1,970	3	2,490	1.5	1.26	59	2,888,069	2.9	146.60
Boyle	678	3	7,127	4.4	10.51	20	49,096	2.9	7.24
Island Lake	89	—	—	—	—	—	—	—	—
Sunset Beach	38	—	—	—	—	1	2,000	2.6	5.26
Mewatha Beach	28	—	—	—	—	1	1	3.5	—
South Baptiste	68	—	—	—	—	—	—	—	—
Bondiss	51	—	—	—	—	—	—	—	—
Island Lake South	58	—	—	—	—	1	83,000	1.7	143.10
White Gull	15	—	—	—	—	—	—	—	—
West Baptiste	24	—	—	—	—	—	—	—	—
Whispering Hills	20	—	—	—	—	—	—	—	—
Total	**9,018**	**50**	**555,819**	**5.5**	**61.63**	**372**	**6,134,761**	**4.1**	**68.02**
County 13									
Cnty of Smoky Lake	2,789	27	142,757	9.6	51.18	212	2,240,091	7.6	80.31
Smoky Lake	1,036	3	227,501	2.8	219.59	36	504,873	3.4	48.73
Vilna	325	2	224	6.1	.68	10	98,231	3.0	30.22
Warspite	97	—	—	—	—	1	5,742	1.0	5.91
Waskatenau	276	—	—	—	—	1	1,888	.3	.68
Total	**4,523**	**32**	**370,482**	**7.0**	**81.91**	**260**	**2,850,825**	**5.7**	**63.02**
County 14									
Cnty of Lacombe	8,911	80	688,051	8.9	77.21	756	8,390,572	8.4	94.15
Lacombe	6,080	11	135,130	1.8	22.22	174	2,579,008	2.8	42.41
Alix	793	—	—	—	—	17	156,181	2.1	19.69
Bentley	841	—	—	—	—	30	94,512	3.5	11.23
Blackfalds	1,688	4	2,001	2.3	1.18	41	66,008	2.4	3.91
Clive	356	—	—	—	—	8	24,571	2.2	6.90
Eckville	869	3	2,417	3.4	2.78	32	328,723	3.6	37.82
Gull Lake	102	—	—	—	—	11	189,500	10.7	185.78
Mirror	508	1	3,619	1.9	7.12	11	146,996	2.1	28.93
Birchcliff	48	—	—	—	—	—	—	—	—
Half Moon Bay	43	—	—	—	—	—	—	—	—
Total	**20,239**	**99**	**831,218**	**4.8**	**41.07**	**1,080**	**11,976,071**	**5.3**	**59.17**
County 16									
Cnty of Wheatland	5,407	28	439,687	5.1	81.31	488	4,364,648	9.0	80.70
Strathmore	3,544	7	46,039	1.9	12.99	105	3,594,024	2.9	101.41
Gleichen	327	—	—	—	—	11	85,791	3.3	26.23
Cluny	95	—	—	—	—	9	2,241	9.4	2.35
Hussar	167	—	—	—	—	10	1,964,865	5.9	1,176.56
Rockyford	293	—	—	—	—	8	34,900	2.7	11.91
Standard	331	3	1,444	9.0	4.36	13	86,709	3.9	26.19
Total	**10,164**	**38**	**487,170**	**3.7**	**47.93**	**644**	**10,133,178**	**6.3**	**99.69**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 17									
Cnty of Mountain View	8,886	52	739,250	5.8	83.19	657	10,914,767	7.3	122.83
Didsbury	3,184	3	9,758	.9	3.06	102	281,305	3.2	8.83
Olds	5,005	14	12,843	2.7	2.56	167	4,527,199	3.3	90.45
Sundre	1,732	4	63,679	2.3	36.76	60	1,094,215	3.4	63.17
Carstairs	1,498	4	87,810	2.6	58.61	52	820,192	3.4	54.75
Cremona	351	1	3,191	2.8	9.09	16	131,524	4.5	37.47
Total	**20,656**	**78**	**916,531**	**3.7**	**44.37**	**1,054**	**17,769,202**	**5.1**	**86.02**
County 18									
Cnty of Paintearth	2,439	17	770,042	6.9	315.72	161	2,116,121	6.6	86.76
Castor	1,030	2	2,798	1.9	2.71	18	131,554	1.7	12.77
Coronation	1,310	1	105	.7	.08	46	2,137,337	3.5	163.15
Halkirk	155	1	17,000	6.4	109.67	9	82,043	5.8	52.93
Total	**4,934**	**21**	**789,945**	**4.2**	**160.10**	**234**	**4,467,055**	**4.7**	**90.53**
County 19									
Cnty of St. Paul	6,595	42	366,800	6.3	55.61	473	4,615,912	7.1	69.99
St. Paul	5,128	11	35,351	2.1	6.89	154	3,318,637	3.0	64.71
Elk Point	1,300	2	2,299	1.5	1.76	35	261,906	2.6	20.14
Horseshoe Bay	20	—	—	—	—	—	—	—	—
Total	**13,043**	**55**	**404,450**	**4.2**	**31.00**	**662**	**8,196,455**	**5.0**	**62.84**
County 20									
Cnty of Strathcona	18,597	107	1,033,892	5.8	55.59	1,644	23,352,226	8.8	125.57
Sherwood Park	31,205	51	63,911	1.6	2.05	608	1,998,612	1.9	6.40
Total	**49,802**	**158**	**1,097,803**	**3.1**	**22.04**	**2,252**	**25,350,838**	**4.5**	**50.90**
County 21									
Cnty of Two Hills	3,086	34	123,449	11.0	40.00	230	1,410,591	7.4	45.70
Two Hills	1,141	3	21,546	2.6	18.88	22	85,902	1.9	7.52
Derwent	149	—	—	—	—	4	15,319	2.6	10.28
Myrnam	383	—	—	—	—	8	14,879	2.0	3.88
Willingdon	371	1	550	2.6	1.48	12	68,136	3.2	18.36
Hairy Hill	73	—	—	—	—	5	1,046,482	6.8	1,433.53
Total	**5,203**	**38**	**145,545**	**7.3**	**27.97**	**281**	**2,641,309**	**5.4**	**50.76**
County 22									
Cnty of Camrose	7,475	31	182,570	4.1	24.42	475	4,646,831	6.3	62.16
Bashaw	829	5	8,393	6.0	10.12	28	153,894	3.3	18.56
Bawlf	375	—	—	—	—	10	1,602,679	2.6	427.38
Bittern Lake	158	—	—	—	—	3	33,815	1.8	21.40
Edberg	124	2	26,465	16.1	213.42	4	27,931	3.2	22.52
Ferintosh	125	—	—	—	—	1	4,500	.8	3.60
Hay Lakes	294	—	—	—	—	10	25,454	3.4	8.65
New Norway	278	—	—	—	—	10	18,388	3.5	6.61
Rosalind	214	1	4,850	4.6	22.66	8	74,917	3.7	35.00
Total	**9,872**	**39**	**222,278**	**3.9**	**22.51**	**549**	**6,588,409**	**5.5**	**66.73**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 23									
Cnty of Red Deer	13,911	84	700,853	6.0	50.38	938	8,213,556	6.7	59.04
Innisfail	5,513	16	75,599	2.9	13.71	154	1,868,854	2.7	33.89
Sylvan Lake	3,937	8	13,291	2.0	3.37	129	1,083,413	3.2	27.51
Bowden	967	2	27,450	2.0	28.38	27	314,976	2.7	32.57
Delburne	577	—	—	—	—	17	148,529	2.9	25.74
Elnora	264	—	—	—	—	6	46,847	2.2	17.74
Penhold	1,495	11	33,102	7.3	22.14	48	1,036,010	3.2	69.29
Norglenwold	107	—	—	—	—	3	166,500	2.8	155.60
Jarvis Bay	55	—	—	—	—	—	—	—	—
Total	**26,826**	**121**	**850,295**	**4.5**	**31.69**	**1,322**	**12,878,685**	**4.9**	**48.00**
County 24									
Cnty of Vermilion River	8,112	47	361,567	5.7	44.57	537	7,119,912	6.6	87.77
Kitscoty	626	—	—	—	—	9	27,136	1.4	4.33
Vermilion	4,259	9	872,993	2.1	204.97	130	1,963,430	3.0	46.10
Dewberry	210	—	—	—	—	5	992,028	2.3	472.39
Marwayne	516	—	—	—	—	18	43,397	3.4	8.41
Paradise Valley	185	1	5,000	5.4	27.02	4	91,630	2.1	49.52
Total	**13,908**	**57**	**1,239,560**	**4.0**	**89.12**	**703**	**10,237,533**	**5.0**	**73.60**
County 25									
Cnty of Leduc	13,220	76	877,634	5.7	66.38	712	9,684,214	5.3	73.25
Calmar	1,160	—	—	—	—	29	275,182	2.5	23.72
Devon	3,691	12	192,494	3.2	52.15	74	721,604	2.0	19.55
Breton	557	—	—	—	—	9	71,804	1.6	12.89
New Sarepta	314	7	234,800	22.2	747.77	19	340,689	6.0	108.49
Thorsby	632	1	2,624	1.5	4.15	19	166,782	3.0	26.38
Warburg	477	—	—	—	—	6	9,061	1.2	1.89
Itaska Beach	4	—	—	—	—	6	180,614	150.0	4,515.35
Golden Days	53	—	—	—	—	6	231,634	11.3	437.04
Sundance Beach	11	—	—	—	—	1	10,651	9.0	96.82
Beaumont	3,996	7	49,528	1.7	12.39	40	176,309	1.0	4.41
Total	**24,115**	**103**	**1,357,080**	**4.2**	**56.27**	**921**	**11,868,544**	**3.8**	**49.21**
County 26									
Cnty of Lethbridge	8,266	61	1,159,434	7.3	140.26	685	5,920,452	8.2	71.62
Coaldale	4,811	14	32,313	2.9	6.71	112	516,819	2.3	10.74
Picture Butte	1,576	1	197	.6	.12	30	161,072	1.9	10.22
Barons	294	1	76	3.4	.25	5	1,068	1.7	.36
Nobleford	531	1	1,000	1.8	1.88	16	79,236	3.0	14.92
Coalhurst	1,289	4	7,114	3.1	5.51	36	280,374	2.7	21.75
Total	**16,767**	**82**	**1,200,134**	**4.8**	**71.57**	**884**	**6,959,021**	**5.2**	**41.50**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 27									
Cnty of Minburn	3,894	15	158,515	3.8	40.70	255	2,678,982	6.5	68.79
Minburn	135	—	—	—	—	5	123,520	3.7	91.49
Mannville	778	2	7,200	2.5	9.25	21	125,775	2.6	16.16
Vegreville	5,276	4	13,419	.7	2.54	135	616,032	2.5	11.67
Innisfree	219	1	5,262	4.5	24.02	3	7,261	1.3	3.31
Lavoy	126	—	—	—	—	4	28,381	3.1	22.52
Total	**10,428**	**22**	**184,396**	**2.1**	**17.68**	**423**	**3,579,951**	**4.0**	**34.33**
County 28									
Cnty of Lac Ste. Anne	7,765	32	332,336	4.1	42.79	392	4,747,344	5.0	61.13
Onoway	639	—	—	—	—	22	157,742	3.4	24.68
Mayerthorpe	1,414	4	22,126	2.8	15.64	32	682,709	2.2	48.28
Alberta Beach	425	1	88,528	2.3	208.30	45	466,950	10.5	109.87
Castle Island	7	—	—	—	—	—	—	—	—
Sunset Point	101	—	—	—	—	2	8,383	1.9	8.30
Sangudo	368	2	2,001	5.4	5.43	9	41,561	2.4	11.29
West Cove	48	—	—	—	—	2	68,050	4.1	141.77
Yellowstone	91	—	—	—	—	3	108,829	3.2	119.59
Ross Haven	73	—	—	—	—	5	100,677	6.8	137.91
Val Quentin	78	—	—	—	—	4	26,288	5.1	33.70
Silver Sands	67	—	—	—	—	1	1	1.4	—
Nakamun Park	18	—	—	—	—	—	—	—	—
South View	44	—	—	—	—	—	—	—	—
Total	**11,138**	**39**	**444,991**	**3.5**	**39.95**	**517**	**6,408,534**	**4.6**	**57.53**
County 29									
Cnty of Flagstaff	4,406	48	727,242	10.8	165.05	416	3,558,904	9.4	80.77
Sedgewick	877	1	9,750	1.1	11.11	14	231,365	1.5	26.38
Alliance	202	1	12,000	4.9	59.40	9	26,674	4.4	13.20
Daysland	678	3	45,148	4.4	66.58	24	240,584	3.5	35.48
Hardisty	642	—	—	—	—	39	213,348	6.0	33.23
Forestburg	936	3	73,120	3.2	78.11	17	115,790	1.8	12.37
Galahad	176	1	1,532	5.6	8.65	4	2,658	2.2	1.51
Heisler	209	1	750	4.7	3.58	6	89,821	2.8	42.97
Killam	1,032	—	—	—	—	15	399,572	1.4	38.71
Lougheed	268	—	—	—	—	6	19,454	2.2	7.25
Strome	267	—	—	—	—	17	445,109	5.9	166.70
Total	**9,693**	**58**	**869,533**	**5.9**	**89.70**	**566**	**5,343,279**	**5.8**	**55.12**
County 30									
Cnty of Lamont	4,419	29	198,155	6.5	44.84	297	2,692,904	6.7	60.93
Lamont	1,576	5	37,000	3.1	23.47	32	358,868	2.0	22.77
Chipman	239	1	35,000	4.1	146.44	8	162,412	3.3	67.95
Mundare	545	1	2,000	1.8	3.66	21	125,597	3.8	23.04
Andrew	485	—	—	—	—	20	775,963	4.1	159.99
Bruderheim	1,131	3	41,952	2.6	37.09	30	283,974	2.6	25.10
Total	**8,395**	**39**	**314,107**	**4.6**	**37.41**	**408**	**4,399,718**	**4.8**	**52.40**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 31									
Cnty of Parkland	24,394	102	1,044,272	4.1	42.80	1,537	24,552,619	6.3	100.65
Stony Plain	5,802	15	91,795	2.5	15.82	101	434,397	1.7	7.48
Betula Beach	10	—	—	—	—	—	—	—	—
Edmonton Beach	322	1	8,000	3.1	24.84	8	151,354	2.4	47.00
Entwistle	478	1	3,000	2.0	6.27	12	163,441	2.5	34.19
Kapasiwin	2	—	—	—	—	4	503	200.0	25.15
Lakeview	28	—	—	—	—	—	—	—	—
Point Alison	2	—	—	—	—	—	—	—	—
Seba Beach	112	—	—	—	—	4	50,601	3.5	45.17
Drayton Valley	5,290	17	96,000	3.2	18.14	191	882,848	3.6	16.68
Wabamun	589	3	4,592	5.0	7.79	14	78,229	2.3	13.28
Total	**37,029**	**139**	**1,247,659**	**3.7**	**33.69**	**1,871**	**26,313,992**	**5.0**	**71.06**
M.D. 6									
M.D. of Cardston	4,419	25	471,162	5.6	106.62	281	2,988,255	6.3	67.62
Cardston	3,497	5	114,346	1.4	32.69	102	2,891,376	2.9	82.68
Magrath	1,637	9	74,151	5.4	45.29	72	436,433	4.3	26.66
Glenwood	300	1	23,313	3.3	77.71	10	111,420	3.3	37.14
Hillspring	251	—	—	—	—	8	31,559	3.1	12.57
Total	**10,104**	**40**	**682,972**	**3.9**	**67.59**	**473**	**6,459,043**	**4.6**	**63.92**
M.D. 9									
M.D. of Pincher Creek	3,093	23	626,922	7.4	202.69	200	2,464,956	6.4	79.69
Pincher Creek	3,800	11	15,194	2.8	3.99	90	330,961	2.3	8.70
Cowley	290	1	1,500	3.4	5.17	8	66,489	2.7	22.92
Total	**7,183**	**35**	**643,616**	**4.8**	**89.60**	**298**	**2,862,406**	**4.1**	**39.84**
M.D. 14									
M.D. of Taber	5,284	40	1,013,209	7.5	191.75	477	5,267,804	9.0	99.69
Taber	6,382	29	143,114	4.5	22.42	194	8,845,255	3.0	138.59
Vauxhall	991	—	—	—	—	16	315,728	1.6	31.85
Grassy Lake	244	—	—	—	—	27	1,570,254	11.0	643.54
Barnwell	402	1	100	2.4	.24	5	25,983	1.2	6.46
Total	**13,303**	**70**	**1,156,423**	**5.2**	**86.92**	**719**	**16,025,024**	**5.4**	**120.46**
M.D. 26									
M.D. of Willow Creek	4,733	29	270,195	6.1	57.08	430	2,717,418	9.0	57.41
Stavely	454	1	32,616	2.2	71.84	12	515,445	2.6	113.53
Nanton	1,564	4	10,581	2.5	6.76	43	825,403	2.7	52.77
Claresholm	3,382	6	7,075	1.7	2.09	144	802,016	4.2	23.71
Fort MacLeod	3,123	4	57,763	1.2	18.49	94	665,292	3.0	21.30
Granum	371	—	—	—	—	27	3,454,318	7.2	931.08
Total	**13,627**	**44**	**378,230**	**3.2**	**27.75**	**750**	**8,979,892**	**5.5**	**65.89**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
M.D. 31									
M.D. of Foothills	9,398	57	1,653,974	6.0	175.99	504	8,299,386	5.3	88.31
High River	5,096	5	3,615	.9	.70	103	2,063,915	2.0	40.50
Black Diamond	1,455	1	200	.6	.13	39	316,763	2.6	21.77
Okotoks	5,522	8	44,693	1.4	8.09	83	737,202	1.5	13.35
Blackie	266	1	676	3.7	2.54	5	103,445	1.8	38.88
Cayley	216	—	—	—	—	—	—	—	—
Turner Valley	1,298	6	62,102	4.6	47.84	33	504,973	2.5	38.90
Longview	284	—	—	—	—	6	169,851	2.1	59.80
Total	**23,535**	**78**	**1,765,260**	**3.3**	**75.00**	**773**	**12,195,535**	**3.2**	**51.81**
M.D. 34									
M.D. of Acadia	618	4	27,867	6.4	45.09	19	112,369	3.0	18.18
Empress	229	—	—	—	—	10	341,132	4.3	148.96
Total	**847**	**4**	**27,867**	**4.7**	**32.90**	**29**	**453,501**	**3.4**	**53.54**
M.D. 44									
M.D. of Rocky View	17,484	105	1,311,879	6.0	75.03	1,694	18,203,238	9.6	104.11
Beiseker	503	2	6,620	3.9	13.16	26	532,898	5.1	104.15
Cochrane	4,337	16	72,637	3.6	16.74	139	1,436,344	3.2	33.11
Crossfield	1,417	—	—	—	—	21	250,305	1.4	17.66
Irricana	701	—	—	—	—	11	43,530	1.5	6.20
Chestermere Lake	609	3	86,270	4.9	141.65	19	469,747	3.1	77.13
Total	**25,051**	**126**	**1,477,406**	**5.0**	**58.97**	**1,910**	**20,927,062**	**7.6**	**83.53**
M.D. 47									
M.D. of Starland	2,120	15	525,921	7.0	248.07	133	1,602,412	6.2	75.58
Morrin	252	—	—	—	—	5	109,777	1.9	43.56
Delia	223	—	—	—	—	6	128,637	2.6	57.68
Munson	152	1	1,461	6.5	9.61	2	3,370	1.3	2.21
Rumsey	70	—	—	—	—	4	41,898	5.7	59.85
Total	**2,817**	**16**	**527,382**	**5.6**	**187.21**	**150**	**1,886,094**	**5.3**	**66.95**
M.D. 48									
M.D. of Kneehill	4,996	34	322,624	6.8	64.57	334	4,270,063	6.6	85.46
Three Hills	3,324	5	3,853	1.5	1.15	71	486,796	2.1	14.64
Acme	457	1	1,513	2.1	3.31	11	58,875	2.4	12.88
Trochu	892	1	400	1.1	.44	23	326,653	2.5	36.62
Carbon	429	1	1,067	2.3	2.48	6	7,991	1.3	1.86
Linden	417	3	25,019	7.1	59.99	8	26,056	1.9	6.24
Torrington	209	—	—	—	—	12	43,074	5.7	20.60
Total	**10,724**	**45**	**354,476**	**4.1**	**33.05**	**465**	**5,219,508**	**4.3**	**48.67**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
M.D. 52									
M.D. of Provost	2,725	24	367,693	8.8	134.93	280	2,691,144	10.2	98.75
Provost	1,725	4	20,373	2.3	11.81	59	1,461,228	3.4	84.70
Amisk	217	3	801	13.8	3.69	5	9,201	2.3	4.24
Czar	191	—	—	—	—	6	55,766	3.1	29.19
Hughenden	276	1	1,203	3.6	4.35	16	135,916	5.7	49.24
Total	**5,134**	**32**	**390,070**	**6.2**	**75.97**	**366**	**4,353,255**	**7.1**	**84.79**
M.D. 61									
M.D. of Wainwright	3,937	26	493,080	6.6	125.24	342	3,809,399	8.6	96.75
Wainwright	4,665	14	53,084	3.0	11.37	169	1,342,826	3.6	28.78
Irma	484	—	—	—	—	16	206,017	3.3	42.56
Chauvin	385	1	500	2.5	1.29	13	1,083,097	3.3	281.32
Edgerton	399	8	196,122	20.0	491.53	22	394,556	5.5	98.88
Total	**9,870**	**49**	**742,786**	**4.9**	**75.25**	**562**	**6,835,895**	**5.6**	**69.25**
M.D. 87									
M.D. of Bonnyville	10,384	54	527,390	5.2	50.78	450	4,299,059	4.3	41.40
Bonnyville	5,575	23	1,120,040	4.1	200.90	169	3,912,337	3.0	70.17
Cold Lake	3,189	9	119,566	2.8	37.49	84	733,538	2.6	23.00
Grand Centre	3,065	13	1,872,394	3.5	512.28	128	3,642,173	3.5	99.64
Bonnyville Beach	63	—	—	—	—	2	20,176	3.1	32.02
Glendon	480	1	25,470	2.0	53.06	9	47,760	1.8	9.95
Pelican Narrows	78	—	—	—	—	3	7,707	3.8	9.88
Total	**23,424**	**100**	**3,664,860**	**4.2**	**156.45**	**845**	**12,662,750**	**3.6**	**54.05**
M.D. 90									
M.D. of Sturgeon	14,019	67	1,102,558	4.7	78.64	933	15,513,176	6.6	110.65
Morinville	5,407	14	88,898	2.5	16.44	86	561,967	1.5	10.39
Gibbons	2,335	3	2,176	1.2	.93	41	391,197	1.7	16.75
Sandy Beach	92	1	1,000	10.8	10.86	3	183,000	3.2	198.91
Bon Accord	1,355	—	—	—	—	18	46,152	1.3	3.40
Legal	949	1	6,944	1.0	7.31	26	209,982	2.7	22.12
Redwater	2,024	5	175,601	2.4	86.75	38	537,934	1.8	26.57
Total	**26,181**	**91**	**1,377,177**	**3.4**	**52.60**	**1,145**	**17,443,408**	**4.3**	**66.62**
M.D. 92									
M.D. of Westlock	6,992	42	309,169	6.0	44.21	354	5,033,358	5.0	71.98
Westlock	4,463	4	9,800	.8	2.19	88	1,912,181	1.9	42.84
Clyde	428	—	—	—	—	15	114,842	3.5	26.83
Larkspur	9	—	—	—	—	—	—	—	—
Total	**11,892**	**46**	**318,969**	**3.8**	**26.82**	**457**	**7,060,381**	**3.8**	**59.37**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
M.D. 130									
M.D. of Smoky River	2,853	34	1,298,135	11.9	455.00	222	3,624,182	7.7	127.03
Falher	1,178	2	4,533	1.6	3.84	37	539,107	3.1	45.76
Girouxville	367	1	319	2.7	.86	17	470,441	4.6	128.18
McLennan	993	5	23,675	5.0	23.84	37	1,098,997	3.7	110.67
Donnelly	405	2	9,397	4.9	23.20	21	199,860	5.1	49.34
Total	**5,796**	**44**	**1,336,059**	**7.5**	**230.51**	**334**	**5,932,587**	**5.7**	**102.35**
M.D. 133									
M.D. of Spirit River	848	22	46,459	25.9	54.78	140	1,693,561	16.5	199.71
Spirit River	1,086	1	562	.9	.51	32	211,842	2.9	19.50
Rycroft	672	—	—	—	—	22	674,767	3.2	100.41
Total	**2,606**	**23**	**47,021**	**8.8**	**18.04**	**194**	**2,580,170**	**7.4**	**99.00**
M.D. 135									
M.D. of Peace River	1,527	21	362,959	13.7	237.69	192	1,603,604	12.5	105.01
Berwyn	661	1	5,416	1.5	8.19	6	158,445	.9	23.97
Grimshaw	2,579	9	173,865	3.4	67.41	78	1,170,326	3.0	45.37
Peace River	6,355	20	233,977	3.1	36.81	274	3,998,689	4.3	62.92
Total	**11,122**	**51**	**776,217**	**4.5**	**69.79**	**550**	**6,931,064**	**4.9**	**62.31**
M.D. 136									
M.D. of Fairview	1,903	23	156,752	12.0	82.37	211	2,112,512	11.0	111.00
Fairview	3,281	12	199,695	3.6	60.86	123	4,087,191	3.7	124.57
Total	**5,184**	**35**	**356,447**	**6.7**	**68.75**	**334**	**6,199,703**	**6.4**	**119.59**
M.D. 99									
M.D. of Clearwater	9,848	45	982,255	4.5	99.74	484	8,049,515	4.9	81.73
Rocky Mountain House	5,261	21	610,744	3.9	116.08	170	2,779,795	3.2	52.83
Caroline	364	2	2,163	5.4	5.94	14	44,583	3.8	12.24
Total	**15,473**	**68**	**1,595,162**	**4.3**	**103.09**	**668**	**10,873,893**	**4.3**	**70.27**
M.D. 1									
M.D. of Cypress	4,795	55	945,464	11.4	197.17	567	6,909,710	11.8	144.10
Irvine	301	5	75,052	16.6	249.34	15	160,317	4.9	53.26
Redcliff	3,834	8	176,026	2.0	45.91	135	1,082,328	3.5	28.22
Total	**8,930**	**68**	**1,196,542**	**7.6**	**133.99**	**717**	**8,152,355**	**8.0**	**91.29**
I.D. #4	**150**	—	—	—	—	**13**	**133,969**	**8.6**	**89.31**
I.D. #5	**282**	**4**	**31,002**	**14.1**	**109.93**	**8**	**419,204**	**2.8**	**148.65**
I.D. #6	128	3	12,375	23.4	96.67	47	552,717	36.7	431.81
Crowsnest Pass	6,912	23	579,649	3.3	83.86	250	3,755,459	3.6	54.33
Total	**7,040**	**26**	**592,024**	**3.6**	**84.09**	**297**	**4,308,176**	**4.2**	**61.19**
I.D. #7	**1,145**	**10**	**200,991**	**8.7**	**175.53**	**90**	**1,648,123**	**7.8**	**143.94**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality		1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
I.D. #8		1,106	9	148,448	8.1	134.22	88	2,774,814	7.9	250.88
	Ghost Lake	28	—	—	—	—	3	11,128	10.7	39.74
	Canmore	4,304	10	45,495	2.3	10.57	108	1,150,430	2.5	26.72
	Waiparous	16	—	—	—	—	—	—	—	—
	Total	**5,454**	**19**	**193,943**	**3.4**	**35.55**	**199**	**3,936,372**	**3.6**	**72.17**
I.D. #9		1,425	4	1,446	2.8	1.01	86	1,008,757	6.0	70.78
	Banff	6,960	7	3,060,351	1.0	439.70	149	6,635,468	2.1	95.33
	Total	**8,385**	**11**	**3,061,797**	**1.3**	**365.15**	**235**	**7,644,255**	**2.8**	**91.16**
I.D. #12		10	2	41,000	200.0	4100.00	51	803,932	510.0	8039.32
	Jasper	4,465	4	3,345	.8	.74	86	791,011	1.9	17.71
	Total	**4,475**	**6**	**44,345**	**1.3**	**9.90**	**137**	**1,594,943**	**3.0**	**35.64**
I.D. #13		**29**	—	—	—	—	**5**	**77,175**	**17.2**	**266.12**
I.D. #14		8,230	53	7,328,098	6.4	890.41	606	31,593,544	7.3	383.88
	Wildwood	377	1	60,000	2.6	159.15	10	190,211	2.6	50.45
	Evansburg	750	1	100	1.3	.13	25	224,211	3.3	29.89
	Edson	7,323	15	661,951	2.0	90.39	170	2,422,884	2.3	33.08
	Hinton	8,629	14	679,152	1.6	78.70	358	4,312,441	4.1	49.97
	Total	**25,309**	**84**	**8,729,301**	**3.3**	**344.90**	**1,169**	**38,743,291**	**4.6**	**153.08**
I.D. #15		2,854	13	273,952	4.5	95.98	217	3,593,539	7.6	125.91
	Whitecourt	5,737	9	241,684	1.5	42.12	234	1,676,645	4.0	29.22
	Ft. Assiniboine	214	2	98,700	9.3	461.21	11	124,866	5.1	58.34
	Total	**8,805**	**24**	**614,336**	**2.7**	**69.77**	**462**	**5,395,050**	**5.2**	**61.27**
I.D. #16		5,332	41	918,595	7.6	172.27	513	14,636,367	9.6	274.50
	Valleyview	2,218	5	20,750	2.2	9.35	78	1,037,627	3.5	46.78
	Fox Creek	2,068	3	7,050	1.4	3.40	38	1,265,673	1.8	61.20
	Grande Cache	3,646	5	454,980	1.3	124.78	56	969,086	1.5	26.57
	Total	**13,264**	**54**	**1,401,375**	**4.0**	**105.65**	**685**	**17,908,753**	**5.1**	**135.01**
I.D. #17		12,534	121	4,063,415	9.6	324.19	1,041	26,660,014	8.3	212.70
	High Prairie	2,817	14	33,513	4.9	11.89	110	8,974,701	3.9	318.59
	Swan Hills	2,407	2	35,500	.8	14.74	59	908,305	2.4	37.73
	Kinuso	282	2	4,890	7.0	17.34	12	82,965	4.2	29.42
	Slave Lake	5,538	11	1,549,766	1.9	279.84	150	2,346,717	2.7	42.37
	Nampa	464	—	—	—	—	10	1,008,539	2.1	217.35
	Total	**24,042**	**150**	**5,687,084**	**6.2**	**236.54**	**1,382**	**39,981,241**	**5.7**	**166.29**
I.D. #18		10,498	87	56,042,827	8.2	5,338.42	904	179,128,291	8.6	1,706.30
	Lac La Biche	2,553	9	45,361	3.5	17.76	103	931,929	4.0	36.50
	Plamondon	236	1	21,500	4.2	91.10	5	33,752	2.1	14.30
	Total	**13,287**	**97**	**56,109,688**	**7.3**	**4,222.90**	**1,012**	**180,093,972**	**7.6**	**1,355.41**

– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Municipality	1987 Population	1987 Fire Count	1987 Amount Of Loss	1987 Fire Rate	1987 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
I.D. #19	1,620	14	64,296	8.6	39.68	141	2,305,771	8.7	142.33
Wanham	238	1	2,035	4.2	8.55	21	129,777	8.8	54.52
Eaglesham	191	1	19,116	5.2	100.08	5	29,014	2.6	15.19
Total	**2,049**	**16**	**85,447**	**7.8**	**41.70**	**167**	**2,464,562**	**8.1**	**120.28**
I.D. #20	**2,922**	**17**	**324,006**	**5.8**	**110.88**	**129**	**1,888,264**	**4.4**	**64.62**
I.D. #21	2,992	35	315,499	11.6	105.44	208	2,893,535	6.9	96.70
Hines Creek	513	3	199,394	5.8	388.68	27	938,653	5.2	182.97
Total	**3,505**	**38**	**514,893**	**10.8**	**146.90**	**235**	**3,832,188**	**6.7**	**109.33**
I.D. #22	4,451	39	470,952	8.7	105.80	324	4,832,757	7.2	108.57
Manning	1,144	4	96,854	3.4	84.66	38	400,032	3.3	34.96
Total	**5,595**	**43**	**567,806**	**7.6**	**101.48**	**362**	**5,232,789**	**6.4**	**93.52**
I.D. #23	6,942	42	865,995	6.0	124.74	542	10,247,108	7.8	147.61
High Level	3,004	11	218,708	3.6	72.80	119	3,986,365	3.9	132.70
Rainbow Lake	1,043	1	58,000	.9	55.60	21	1,559,185	2.0	149.49
Total	**10,989**	**54**	**1,142,703**	**4.9**	**103.98**	**682**	**15,792,658**	**6.2**	**143.71**
I.D. #24	**282**	**2**	**33,100**	**7.0**	**117.37**	**8**	**5,304,915**	**2.8**	**1,881.17**
Indian Reserves	**33,533**	**99**	**2,038,824**	**3.0**	**60.80**	**857**	**17,163,151**	**2.5**	**51.18**
S.A. #2	2,553	16	215,664	6.2	84.47	157	1,691,164	6.1	66.24
Hanna	3,017	3	17,455	.9	5.78	69	841,433	2.2	27.88
Total	**5,570**	**19**	**233,119**	**3.4**	**41.85**	**226**	**2,532,597**	**4.0**	**45.46**
S.A. #3	1,691	7	70,818	4.1	41.87	105	1,440,758	6.2	85.20
Cereal	251	—	—	—	—	4	135,168	1.5	53.85
Oyen	1,005	—	—	—	—	27	163,024	2.6	16.22
Youngstown	294	1	8,000	3.4	27.21	9	76,986	3.0	26.18
Total	**3,241**	**8**	**78,818**	**2.4**	**24.31**	**145**	**1,815,936**	**4.4**	**56.03**
S.A. #4	1,766	9	39,793	5.0	22.53	115	1,425,223	6.5	80.70
Veteran	312	2	15,500	6.4	49.67	15	1,884,246	4.8	603.92
Consort	674	1	674	1.4	1.00	20	698,549	2.9	103.64
Total	**2,752**	**12**	**55,967**	**4.3**	**20.33**	**150**	**4,008,018**	**5.4**	**145.64**

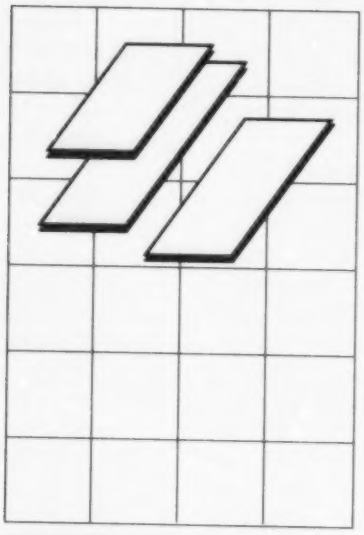
– Continued on next page –

Municipal Fire Loss

for the Year Ending December 31, 1987 (cont'd)

Cities	1987					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
Airdrie	10,461	5	10,400	.4	.99	145	1,378,085	1.3	13.17
Calgary	647,285	1,958	10,948,899	3.0	16.19	28,176	152,574,391	4.3	23.57
Camrose	12,968	23	1,591,736	1.7	122.74	302	3,808,972	2.3	29.37
Drumheller	6,366	17	1,782,064	2.6	279.93	203	4,321,998	3.1	67.98
Edmonton	576,249	1,409	15,546,529	2.4	26.97	16,350	152,719,790	2.8	26.50
Fort McMurray	34,949	132	1,016,331	3.7	29.08	1,812	11,863,826	5.1	33.94
Fort Saskatchewan	11,983	33	1,062,317	2.7	88.65	272	12,784,586	2.2	106.68
Grande Prairie	26,471	116	461,359	4.3	17.42	1,577	8,595,863	5.9	32.47
Leduc	13,126	26	138,623	1.9	10.56	312	2,459,395	2.3	18.73
Lethbridge	60,610	180	782,643	2.9	12.91	2,834	15,951,060	4.6	26.31
Lloydminster	10,201	19	79,162	1.8	7.76	285	3,002,635	2.7	29.43
Medicine Hat	41,804	135	1,011,370	3.2	24.19	2,256	17,222,468	5.3	41.19
Red Deer	54,309	126	655,266	2.3	12.06	1,921	10,855,413	3.5	19.98
St. Albert	37,008	45	174,570	1.2	4.71	1,261	6,495,567	3.4	17.55
Spruce Grove	11,918	23	58,824	1.9	4.93	356	2,771,914	2.9	23.25
Wetaskiwin	10,103	17	677,577	1.6	67.06	226	9,339,335	2.2	92.44

SECTION 3



Glossary

Glossary

Act or Omission

The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.

Incendiary or Set Fires - includes arson, suspected incendiarism, riot, mischief or vandalism.

Misuse of Source of Ignition - includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing, welding or cutting too close to combustible material or torch too close to combustible material.

Misuse of Material Ignited - includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheating cooking oil, combustible placed too close to heat, and improper storage.

Mechanical and Electrical Failure or Malfunction - includes part failure, automatic or manual control failure, electrical short circuit and part worn out.

Construction, Design or Installation Deficiency - includes construction or design deficiency, installation too close to a combustible, other installation deficiency and overfusing.

Misuse of Equipment - overfuelling, includes any misuse of equipment or tools.

Human Failing - includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

Area of Origin

The area of a building or vehicle where the fire started.

Means of Egress - the area allowing an individual transit or a way of going out. Includes hallway, stairway, escalator, lobby and elevator.

Assembly, Sales Area - areas where groups of people gather. Includes theatre, arena, lounge, living room, sales or show room, library, museum and sports facility.

Function Area - the area where a mode of action or activity is undertaken. Includes sleeping area, dining area, bar, washroom, office, laboratory, printing and photographic reproduction, kitchen, laundry room, operating room, performance area and manufacturing area.

Storage Area - the area inside a building where items are stored. Includes product storage area, closet, equipment area, records storage area, shipping and receiving area, trash and rubbish area, vehicle garage and agricultural product storage.

Service Facilities - conveyance items such as dumbwaiters, service shafts, laundry and garbage chutes, heating and cooking ducts and chimneys or gas vents.

Structural Area - includes crawl space, balcony, ceiling and floor assembly, ceiling and roof assembly, wall assembly, exterior wall or exterior roof and awning or canopy.

Vehicle Area - includes engine area, fuel area, control area, passenger area and cargo area.

Outside Area - includes open area such as lawn, field or park, court, patio, parking area, outdoor storage area and trash or rubbish area.

Death

A person killed accidently as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.

Fire Death - refers to a person who died directly as a result of a fire, either by smoke inhalation or burns.

Death Involving Fire - refers to a person who was in a place where fire occurred, but who may have died from a cause other than the fire itself (eg. a person who dies in a automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing.)

Fuel or Energy

Is the fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.

Ignition Scenario

The combination of three components – the source of ignition, material first ignited and act or omission – in the chain of events that lead to a fire. A small number of ignition scenarios recur in the ignition of fires that account for the majority of fire incidents. Identification of these helps locate problems more specifically for the design of appropriate prevention strategies.

Injuries

A person accidentally injured as a direct result of a fire (a member of the fire department accidentally injured while in the process of fighting a fire or injured as a result of an accident while en route to or returning from the scene of an actual fire is considered a fire action injury.)

Minor Injury - an injury that does not require hospitalization of over a 24-hour period or absence from work of not more than one full day.

Light Injury - an injury that requires admission to a hospital of over 24 to 48 hours and/or absence from work for a period of two to fifteen days.

Serious Injury - an injury that requires admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

Material First Ignited

The actual material that ignites and creates the fire condition.

Structural Components, Finish Materials - includes roof covering, wall covering, floor covering, structural component, ceiling covering and insulation.

Furniture, Furnishings - includes furniture, ironing board, mattress, bedding, drapery and broom, mop or brush.

Clothing, Textiles - includes clothing, fabric, fur and tarpaulin.

Wood, Paper Products - includes wood, wood shavings, paper, cardboard and paper stock.

Flammable Liquids - includes gasoline, fuel oil, flammable liquids, paint, varnish, tar, asphalt, polish and wax.

Flammable Gases - includes natural gas, propane, anaesthetic gas, acetylene and hydrogen.

Chemicals - includes starch, flour, cellulose nitrate, plastic, oxidizing material, magnesium and alloys, titanium, natural or synthetic rubber and ammonium nitrate.

Agricultural, Forestry Products - includes fibres, grains, hay, trees, felled timber, grass, fertilizer and manure.

Miscellaneous - includes coal, garbage, trash, oily rags and artificial trees.

Property Classification

The principal use or occupancy of the building.

Assembly - property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

Institutional - property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for the aged, children's hospitals, hospitals and clinics.

Residential - property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

Business and Personal Service - property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

Mercantile - property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

Industrial Manufacturing Properties - property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

Storage Properties - property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

Special Property-Transportation Equipment - mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

Miscellaneous - includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

Source of Ignition

The actual equipment, device or object which brings about ignition.

Cooking Equipment - includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

Heating Equipment - includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

Appliance and Equipment - includes dryer, air conditioning equipment, pressing iron and incinerator.

Smoker's Material and "Open" Flames - cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

Exposure - includes exposure from an attached or detached structure, lumber yard, open fire, forest, grass and brush.

Miscellaneous - includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

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